

Spencer Creek Pilot Watershed Analysis



A day of huckleberry picking at Buck Lake around 1905 (photo courtesy of the Anderson family photo collection).

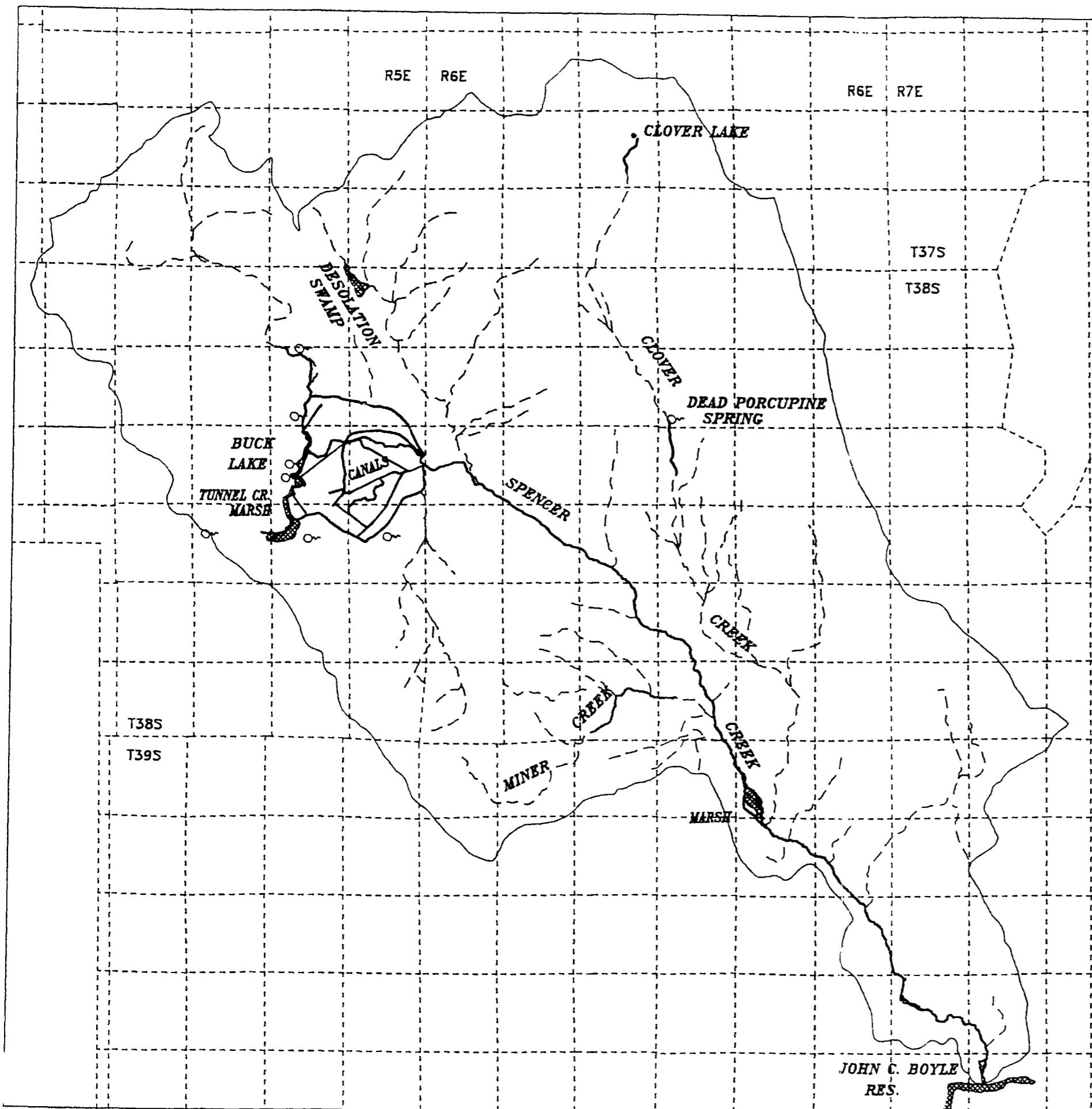
August 1995

SPENCER CREEK WATERSHED

KLAMATH COUNTY, OREGON

WILLAMETTE MERIDIAN

FEBRUARY 1995



LEGEND

- ~~~~~ PERENNIAL STREAM SEGMENTS
- - - - - INTERMITTENT STREAMS
- ~ SPRINGS
- WATER BODIES/MARSHES



HYDROLOGY

MAP 2

SPENCER CREEK WATERSHED

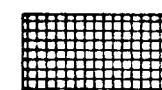
KLAMATH COUNTY, OREGON
WILLAMETTE MERIDIAN

FEBRUARY 1995

LEGEND



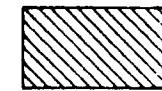
WEYERHAEUSER OWNERSHIP



BLM ADMINISTERED



USFS ADMINISTERED



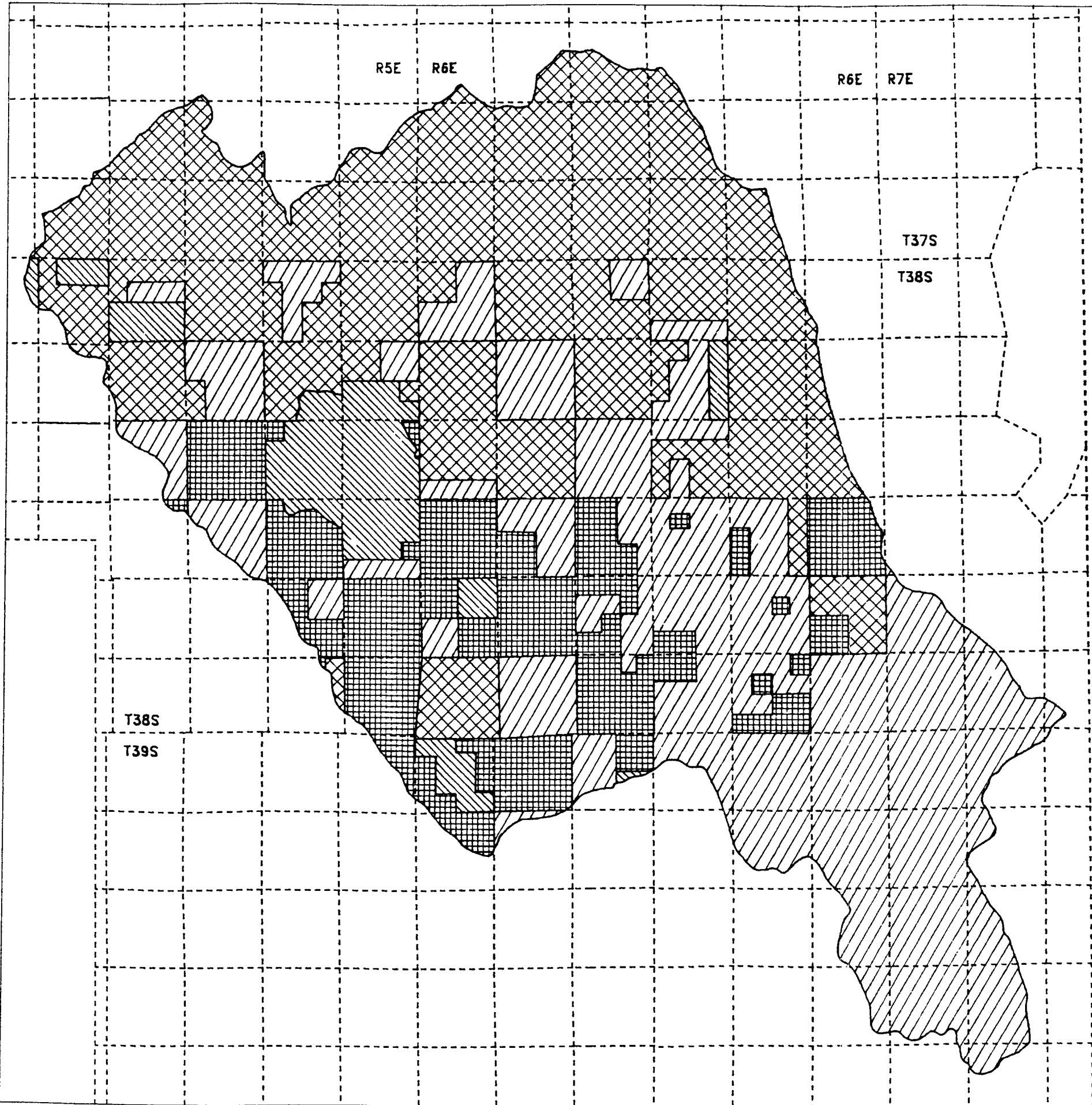
OTHER OWNERSHIP



STATUTE MILES

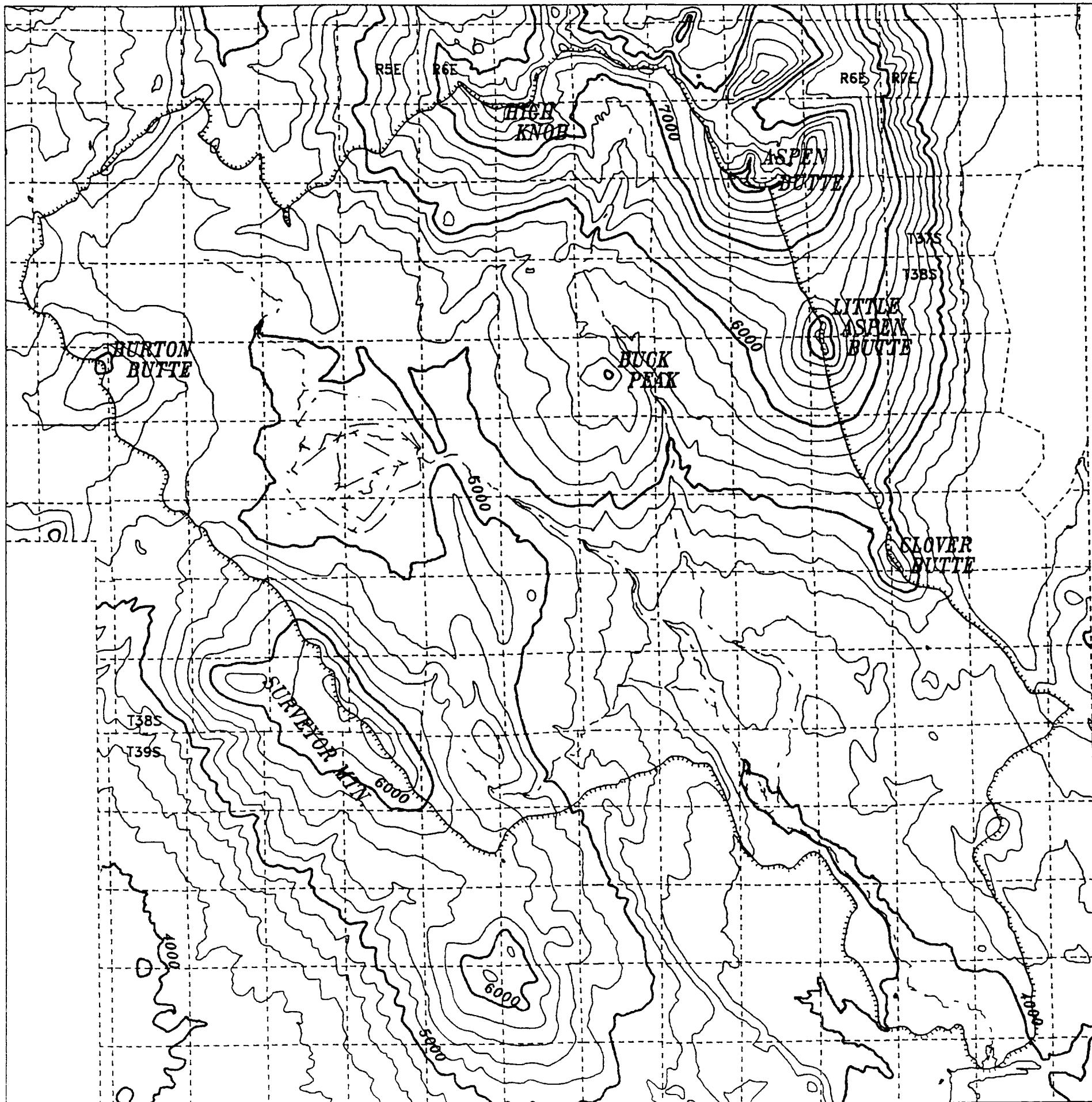


*LAND
OWNERSHIP*



MAP 3

SPENCER CREEK WATERSHED
KLAMATH COUNTY, OREGON
WILLAMETTE MERIDIAN
FEBRUARY 1995



LEGEND

WATERSHED
BOUNDARY

MAJOR STREAMS

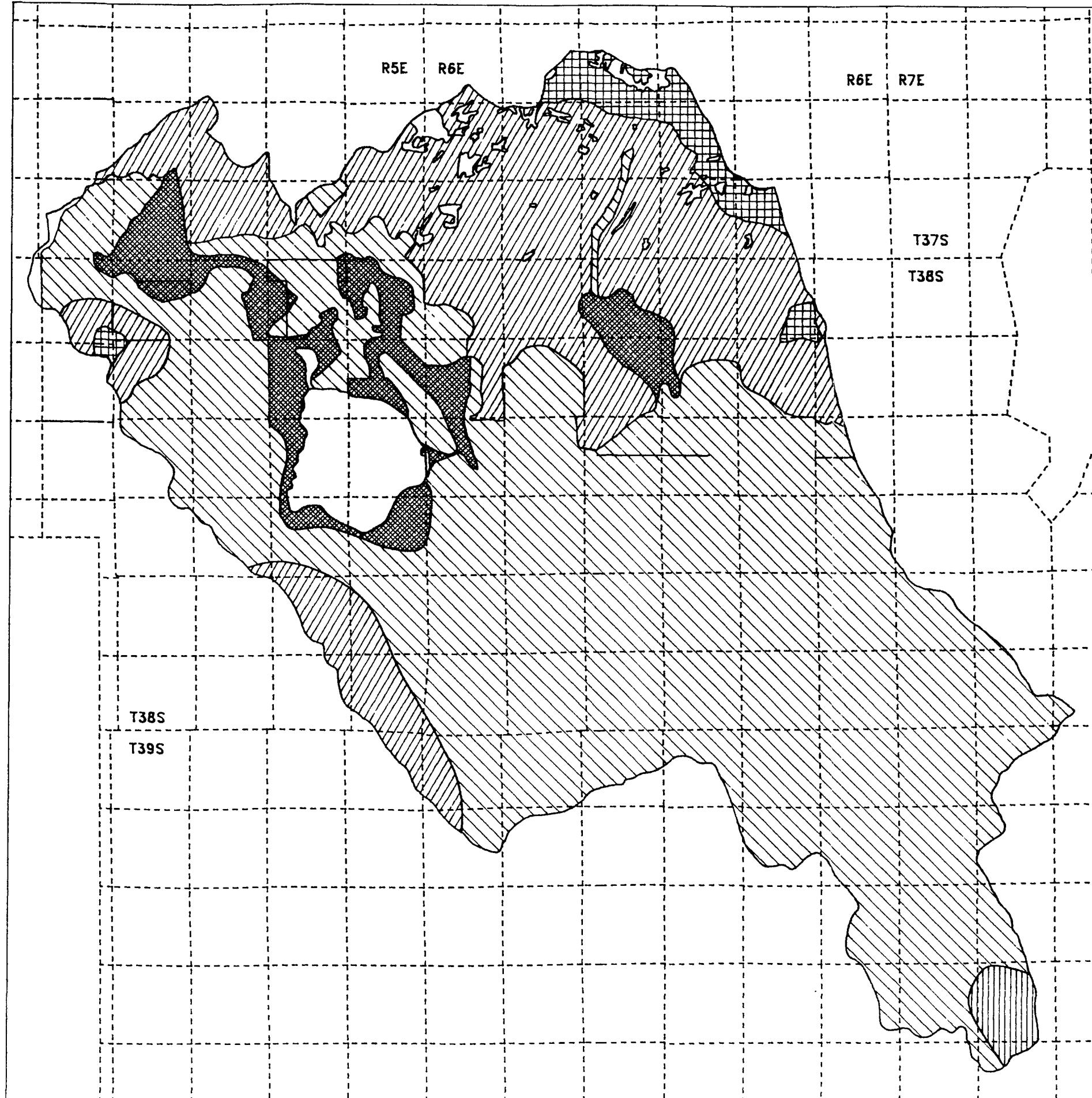
CONTOUR INTERVAL: 200 FT.

1 0 1 2
STATUTE MILES



TOPOGRAPHY

MAP 4



SPENCER CREEK WATERSHED
KLAMATH COUNTY, OREGON
WILLAMETTE MERIDIAN
FEBRUARY 1995

LEGEND

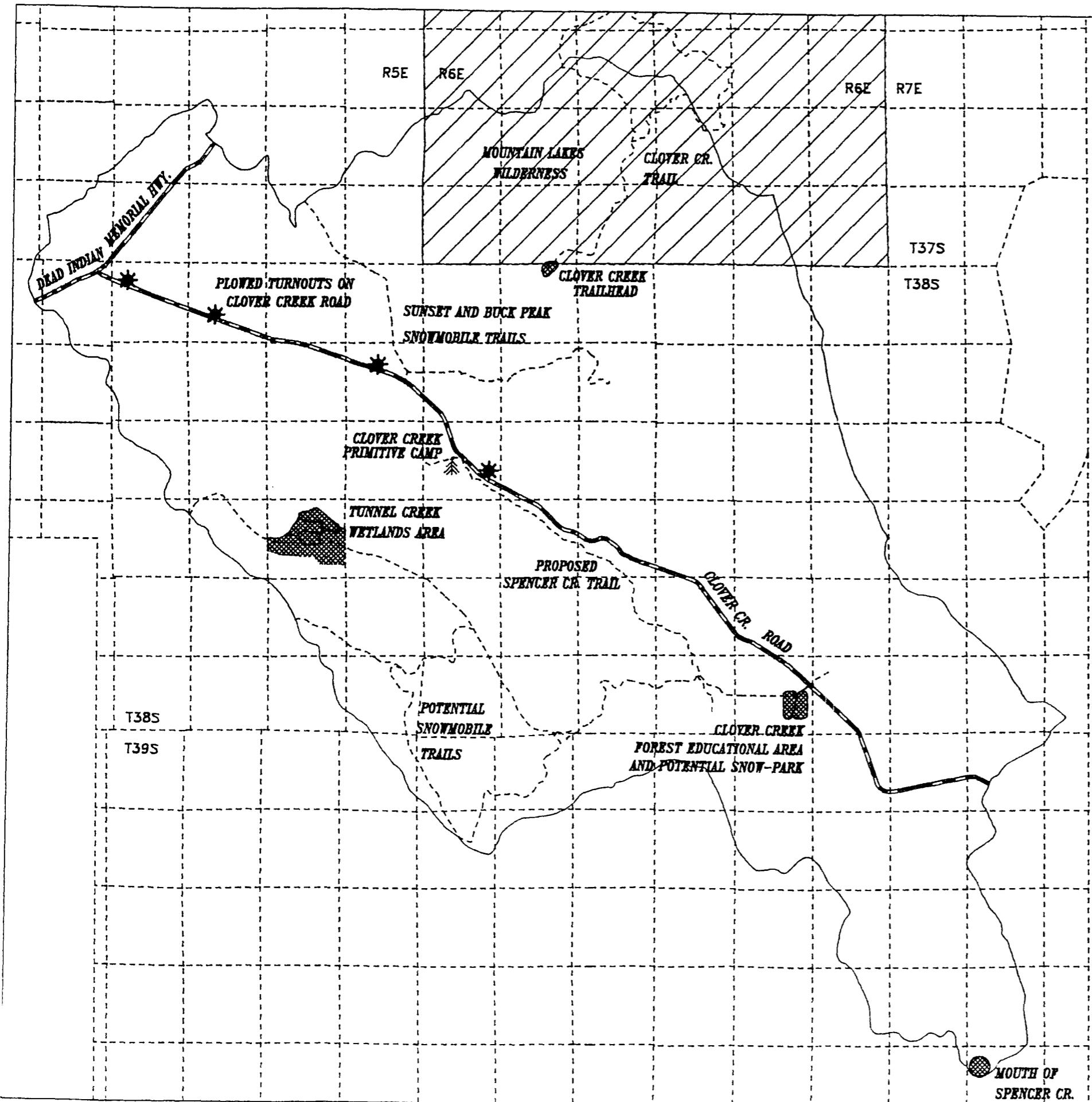
- [Cross-hatch] LODGEPOLE PINE
- [Diagonal lines] MOUNTAIN HEMLOCK
- [Vertical lines] PONDEROSA PINE
- [Horizontal lines] SHASTA RED FIR
- [Diagonal lines] MIXED CONIFER
- [White box] NON-FOREST

1 0 1 2
STATUTE MILES



POTENTIAL
NATURAL
VEGETATION

MAP 5



SPENCER CREEK WATERSHED
KLAMATH COUNTY, OREGON
WILLAMETTE MERIDIAN
FEBRUARY 1995

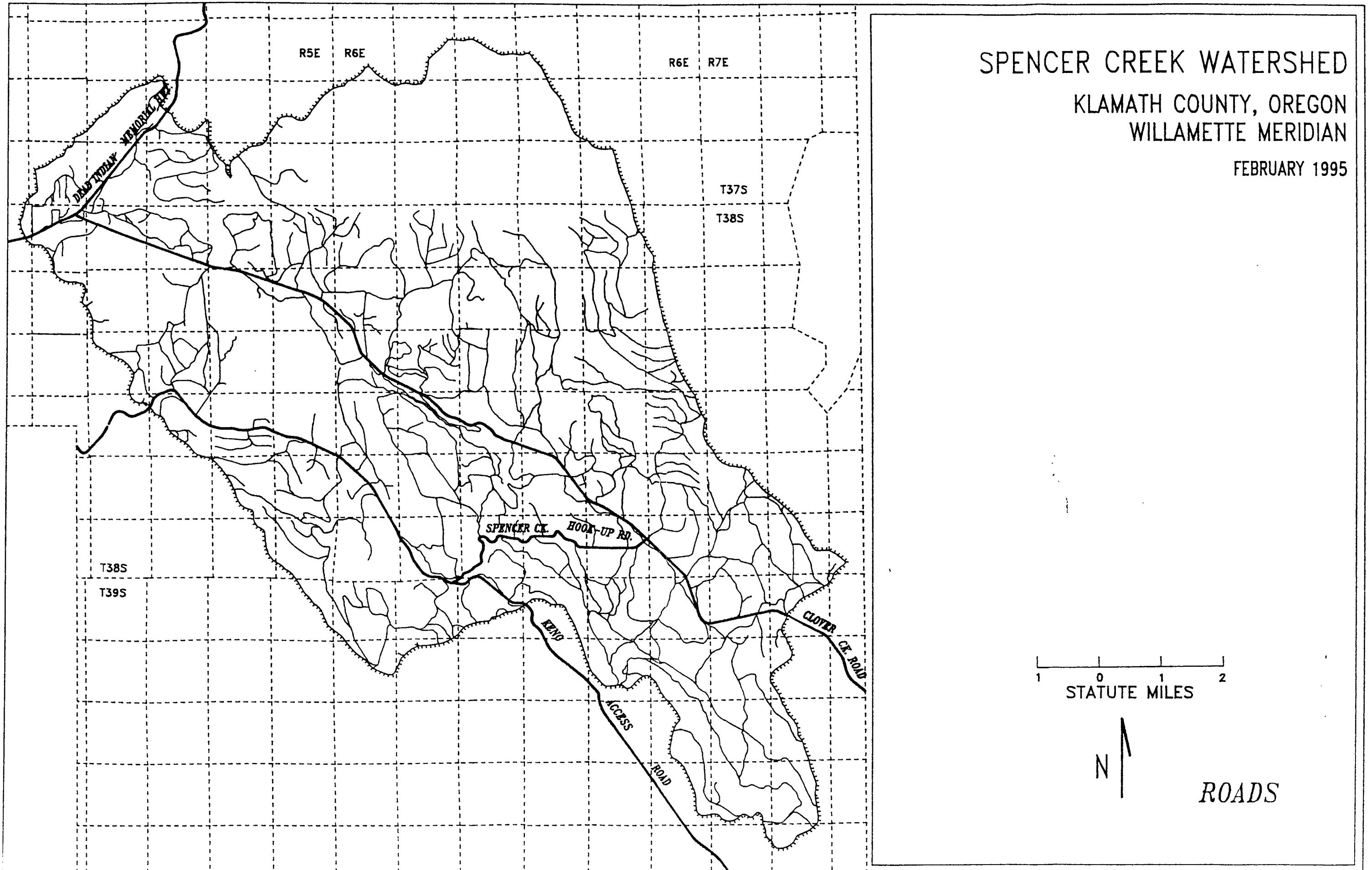
*RECREATION
OPPORTUNITIES
IN THE
SPENCER CREEK
WATERSHED*

1 0 1 2
STATUTE MILES

N

*RECREATION
MAP*

MAP 6



MAP 7

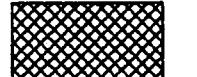
SPENCER CREEK WATERSHED

KLAMATH COUNTY, OREGON

WILLAMETTE MERIDIAN

FEBRUARY 1995

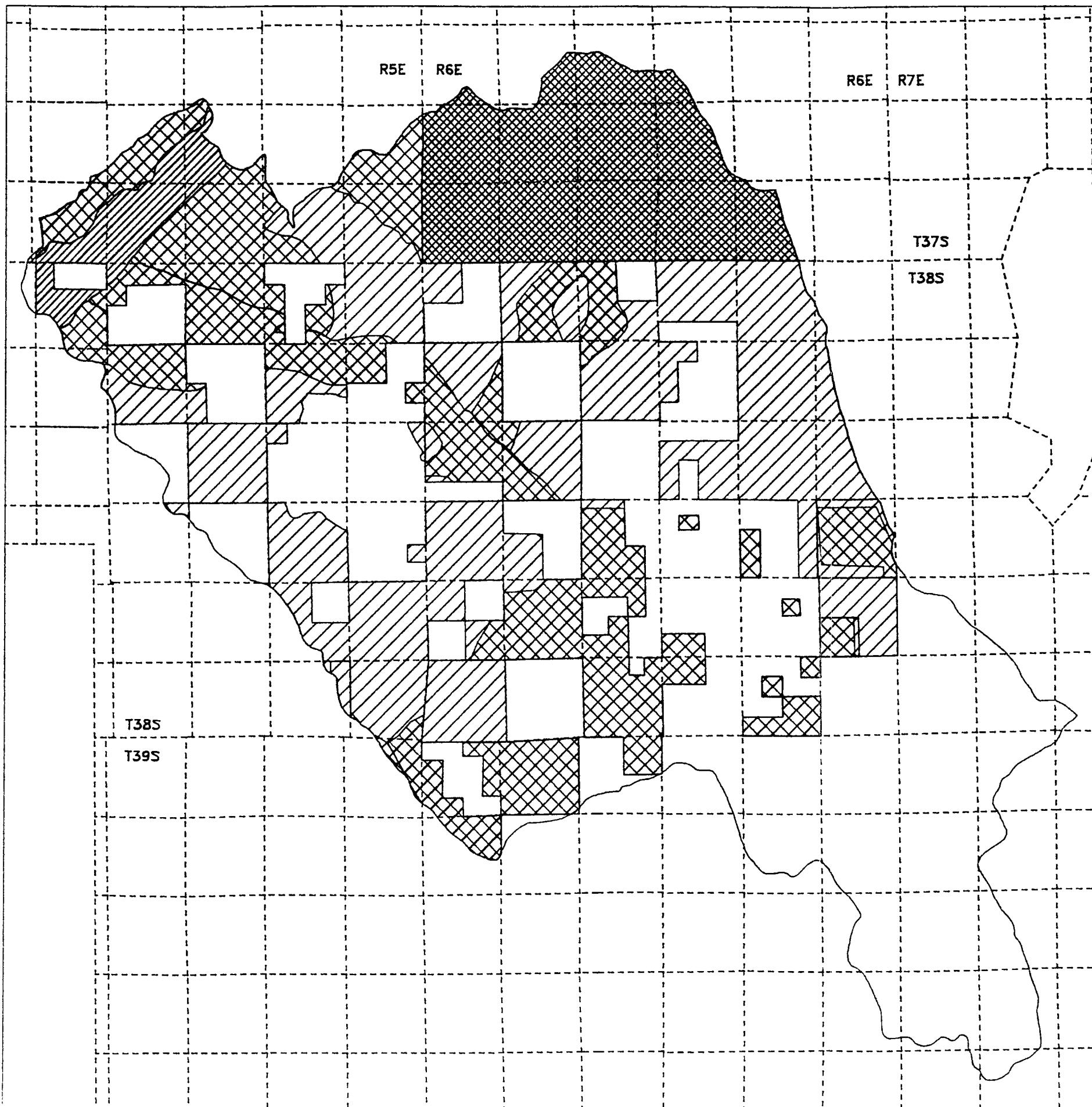
LEGEND

-  CLASS 1/PRESERVATION
-  CLASS 2/RETENTION
-  CLASS 3/PARTIAL RETENTION
-  CLASS 4/MODIFICATION

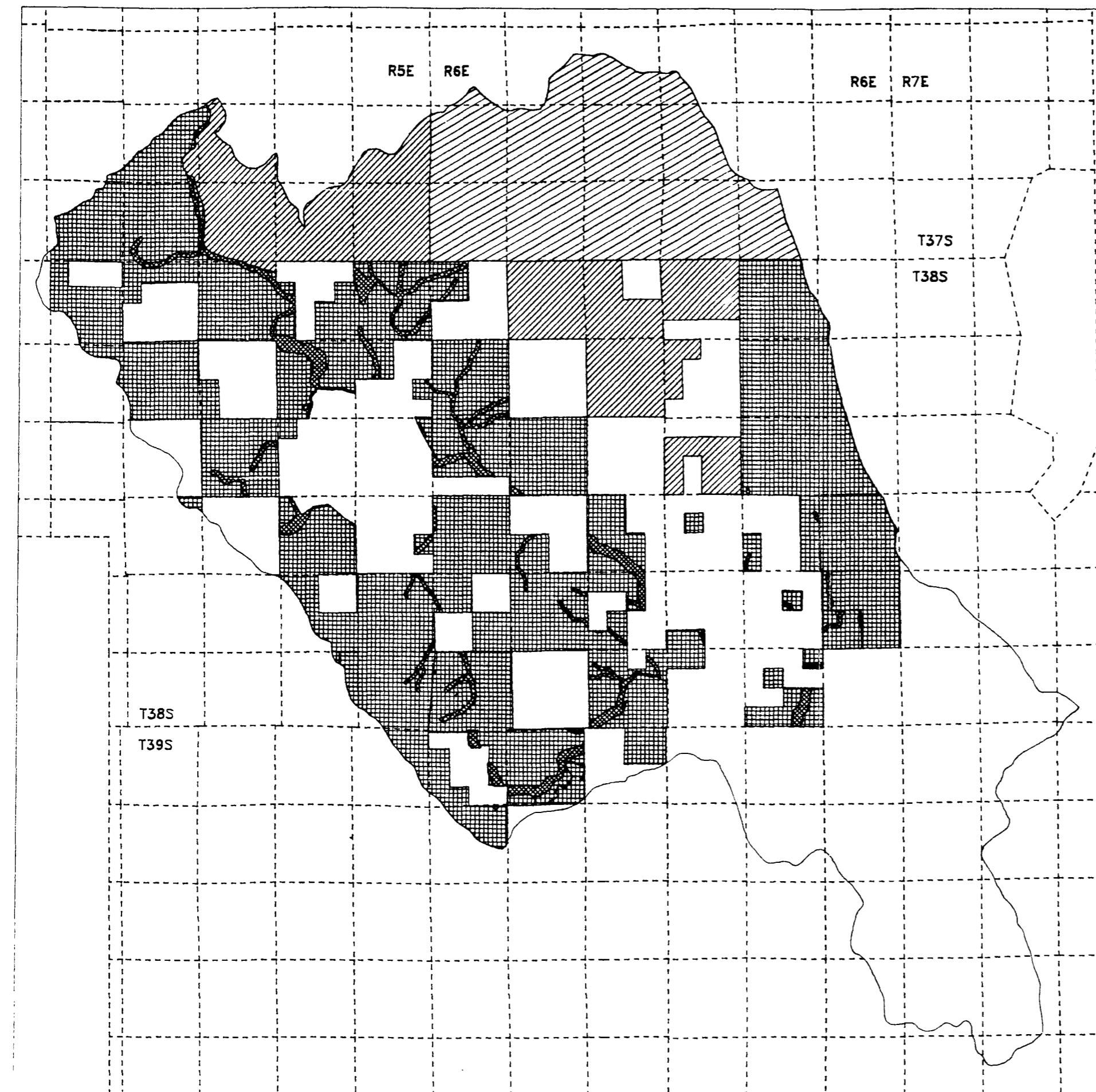
1 0 1 2
STATUTE MILES



VISUAL
RESOURCE
MANAGEMENT



MAP 8



SPENCER CREEK WATERSHED
KLAMATH COUNTY, OREGON
WILLAMETTE MERIDIAN
FEBRUARY 1995

LEGEND

- [Diagonal hatching] LATE SUCCESSIONAL RESERVE
- [Solid dark gray] RIPARIAN RESERVE
- [Cross-hatching] MATRIX
- [Horizontal hatching] WILDERNESS AREA
- [White box] PRIVATE LAND

1 0 1 2
STATUTE MILES



NORTHWEST
FOREST PLAN
ALLOCATIONS

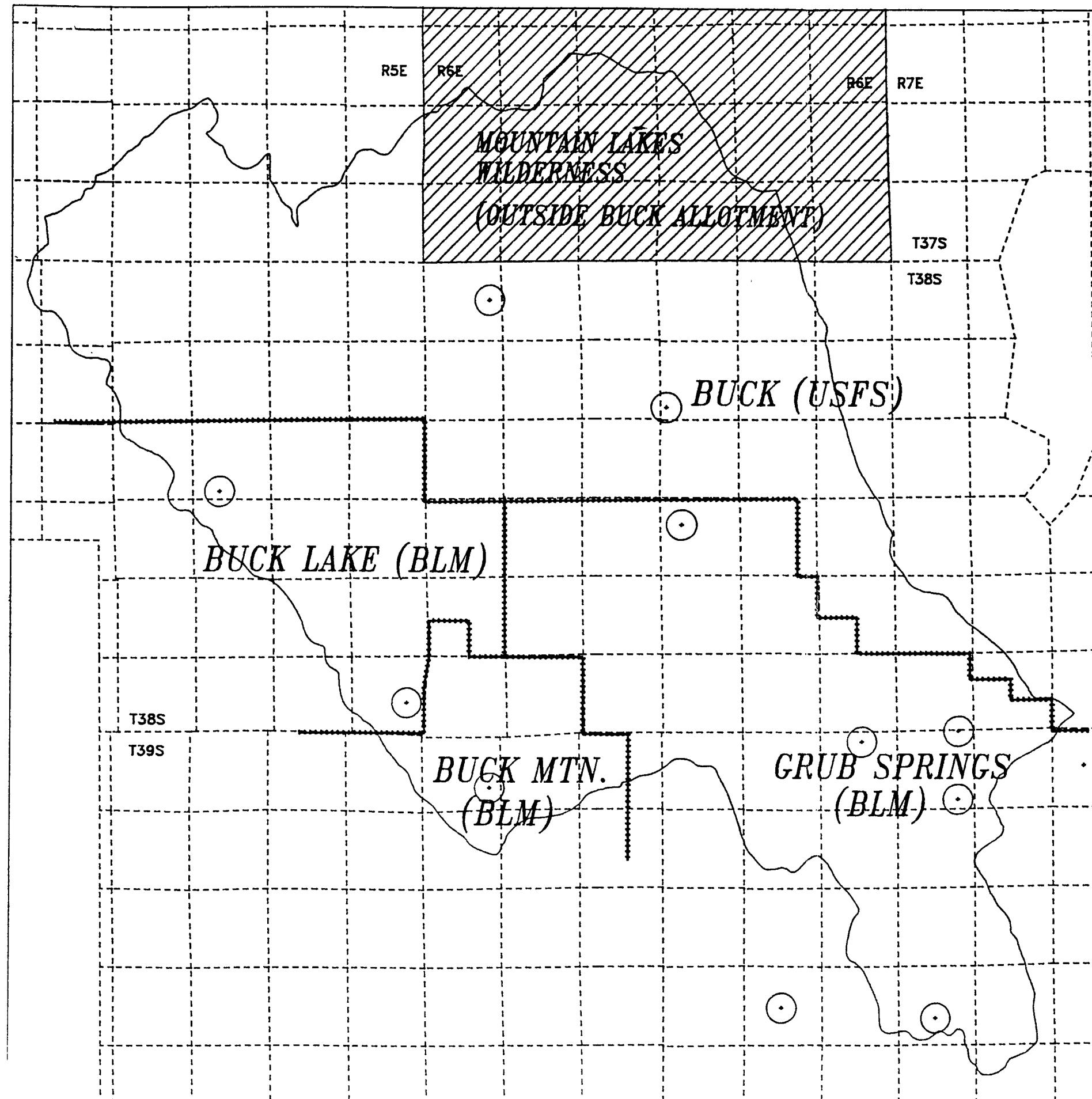
MAP 9

SPENCER CREEK WATERSHED

KLAMATH COUNTY, OREGON

WILLAMETTE MERIDIAN

FEBRUARY 1995



LEGEND

— ALLOTMENT BOUNDARIES

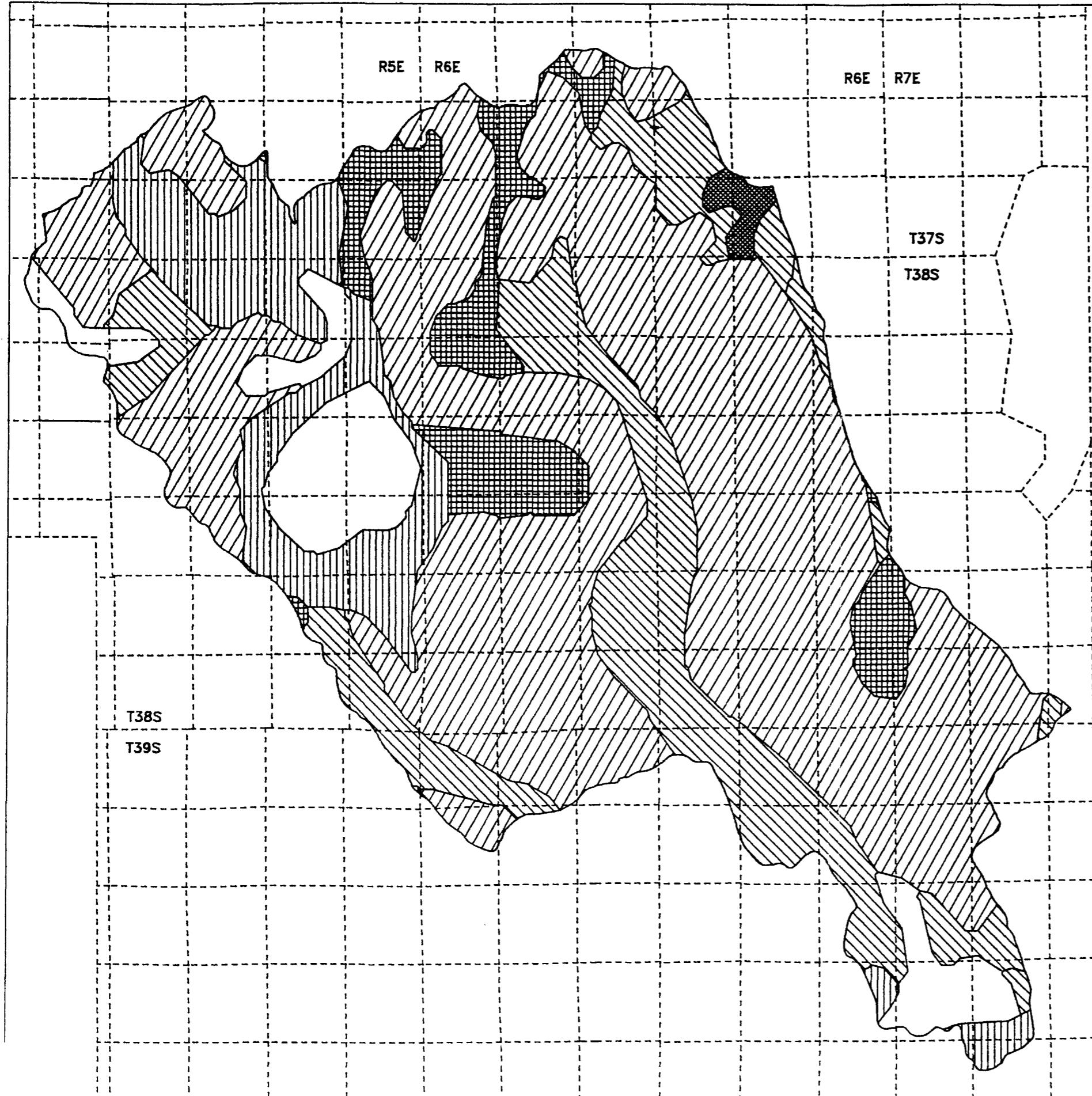
● WATER HOLES
(EXCLUDING CREEKS)

1 0 1 2
STATUTE MILES

N

RANGE
ALLOTMENTS

MAP 10



SPENCER CREEK WATERSHED
KLAMATH COUNTY, OREGON
WILLAMETTE MERIDIAN
FEBRUARY 1995

LEGEND

- [Horizontal lines] FORESTED AREA
2,000 - 5,000 BF/ACRE
- [Cross-hatching] FORESTED AREA
5,000 - 10,000 BF/ACRE
- [Diagonal lines] FORESTED AREA
10,000 - 25,000 BF/ACRE
- [Grid pattern] DEFORESTED
BY FIRES
- [Empty square] NON-FOREST
MARSHES AND MEADOWS
- [Solid black square] NON-FOREST
ROCK

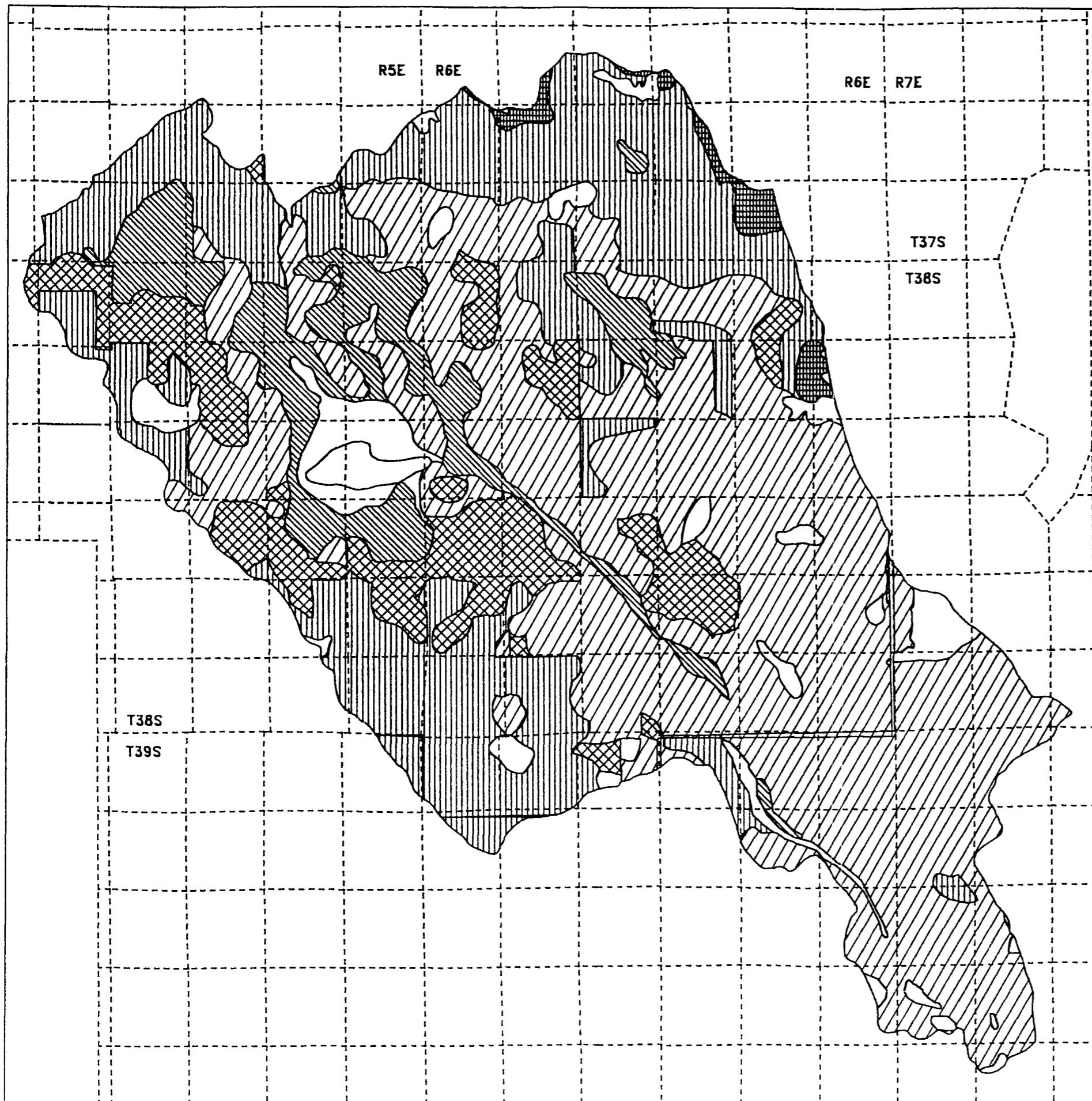
DERIVED FROM VEGETATION SURVEY AND
MAPPING BY JOHN B. LEIBERG
US GEOLOGICAL SURVEY 1899

1 0 1 2
STATUTE MILES



LEIBERG
VEGETATION MAP
CIRCA 1899

MAP 11

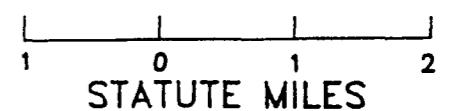


SPENCER CREEK WATERSHED
KLAMATH COUNTY, OREGON
WILLAMETTE MERIDIAN
FEBRUARY 1995

LEGEND

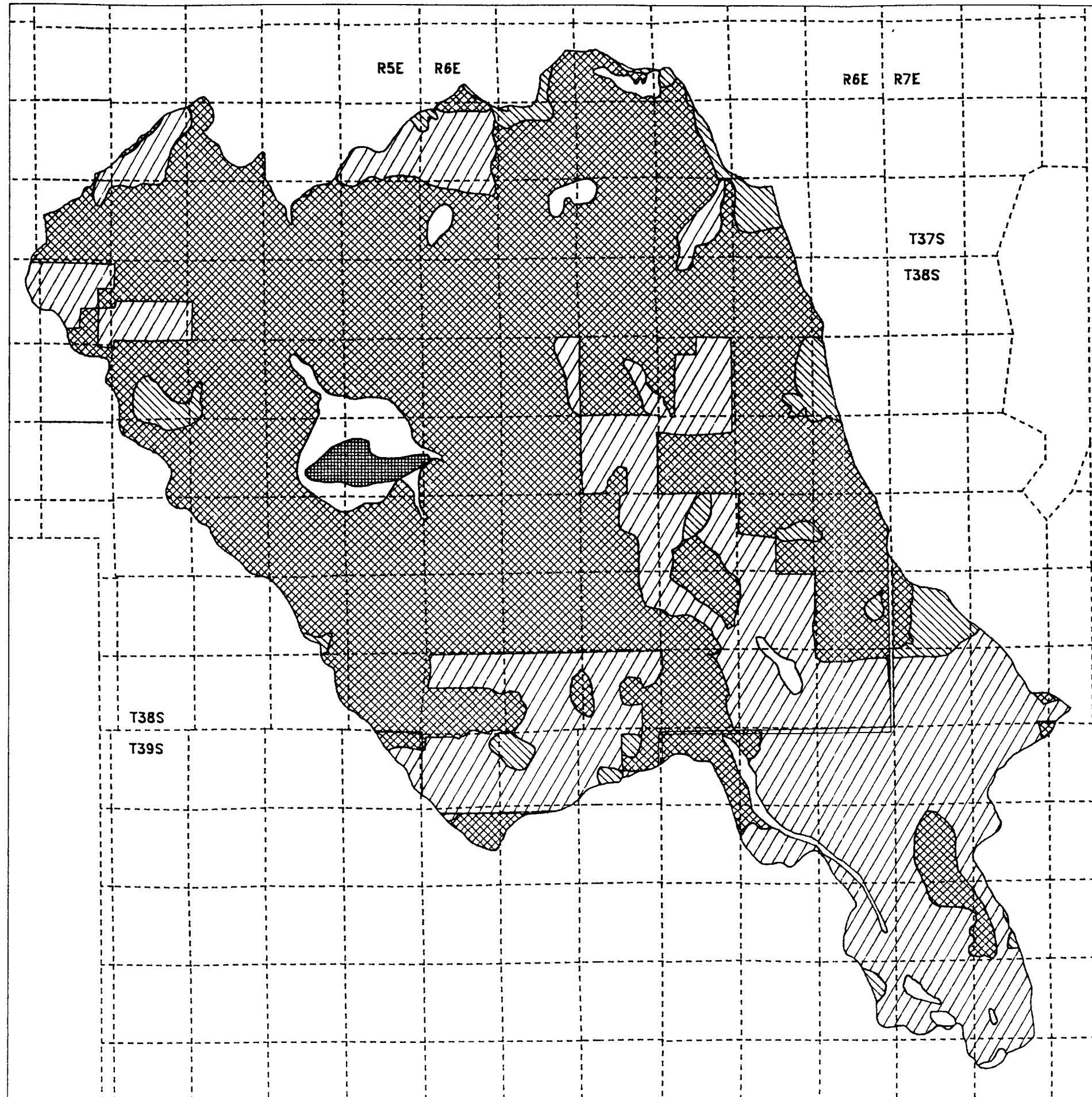
- [Hatching 1] SHASTA RED FIR / MTN. HEMLOCK
- [Hatching 2] LODGEPOLE PINE
- [Hatching 3] WHITE FIR / DOUGLAS FIR
- [Hatching 4] SUB-ALPINE FIR
- [Hatching 5] PONDEROSA PINE
- [White box] ROCK / GRASS / SHRUB / OPEN WATER

DERIVED FROM KLAMATH COUNTY TIMBER
INVENTORY MAP, USDA FOREST SERVICE
1945



**DOMINANT
SPECIES
GROUPS
CIRCA 1945**

MAP 12

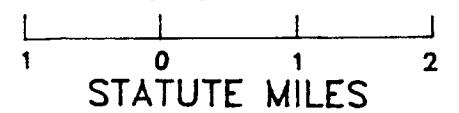


SPENCER CREEK WATERSHED
KLAMATH COUNTY, OREGON
WILLAMETTE MERIDIAN
FEBRUARY 1995

LEGEND

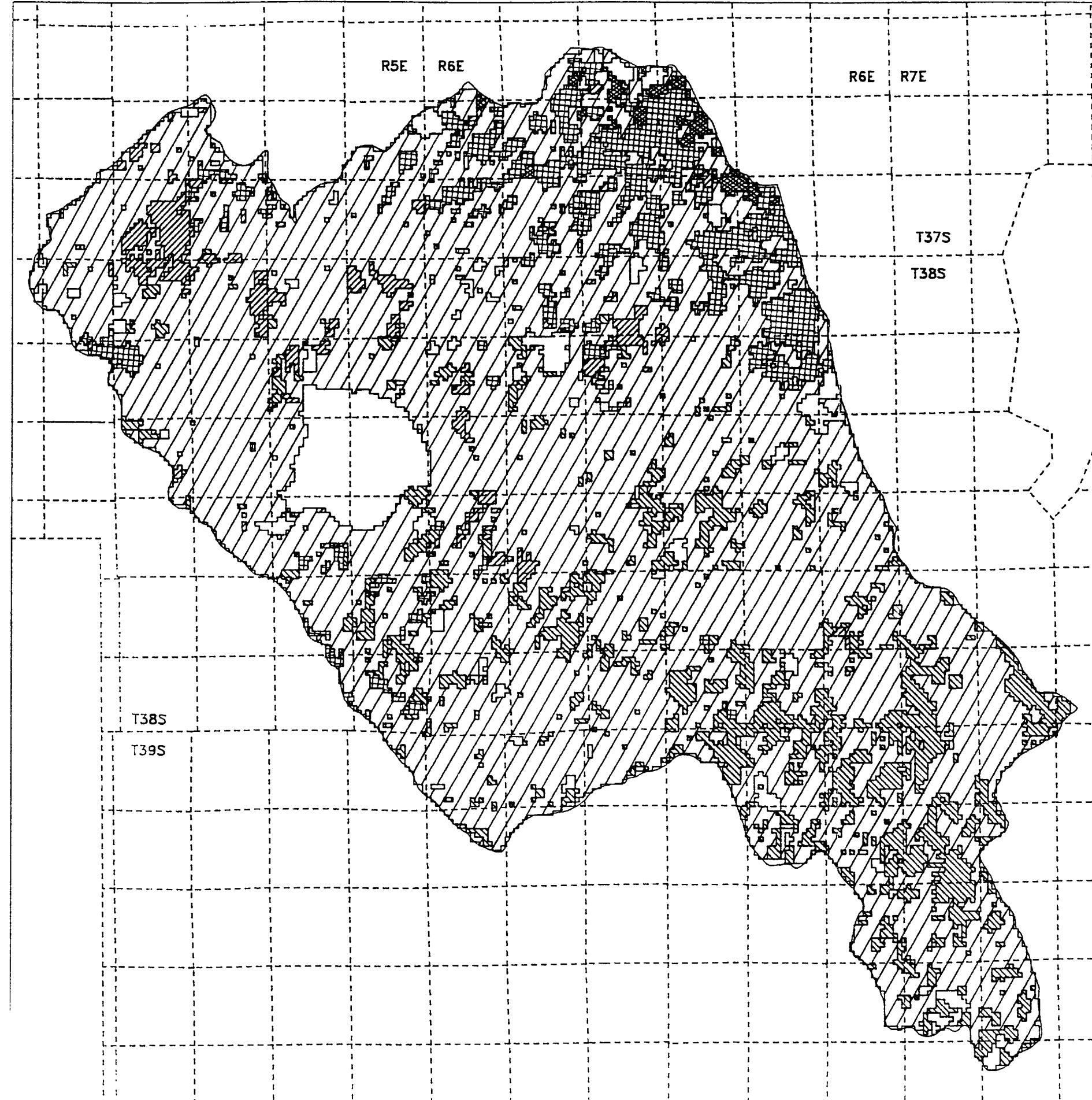
- [Cross-hatched square] LATE AND MID SERAL FOREST
- [Diagonal-lined square] EARLY-MID SERAL FOREST
- [Horizontal-lined square] EARLY SERAL FOREST
- [White square] NON FOREST GRASS/ROCK
- [Solid black square] OPEN WATER

*DERIVED FROM KLAMATH COUNTY TIMBER
INVENTORY MAP, USDA FOREST SERVICE
1945*



*SERAL STAGES
CIRCA 1945*

MAP 13



SPENCER CREEK WATERSHED
KLAMATH COUNTY, OREGON
WILLAMETTE MERIDIAN
FEBRUARY 1995

LEGEND

- MTN. HEMLOCK
- LODGEPOLE PINE
- MIXED-CONIFER
- SHASTA RED FIR
- PONDEROSA PINE
- GRASS/ROCK/SHRUB

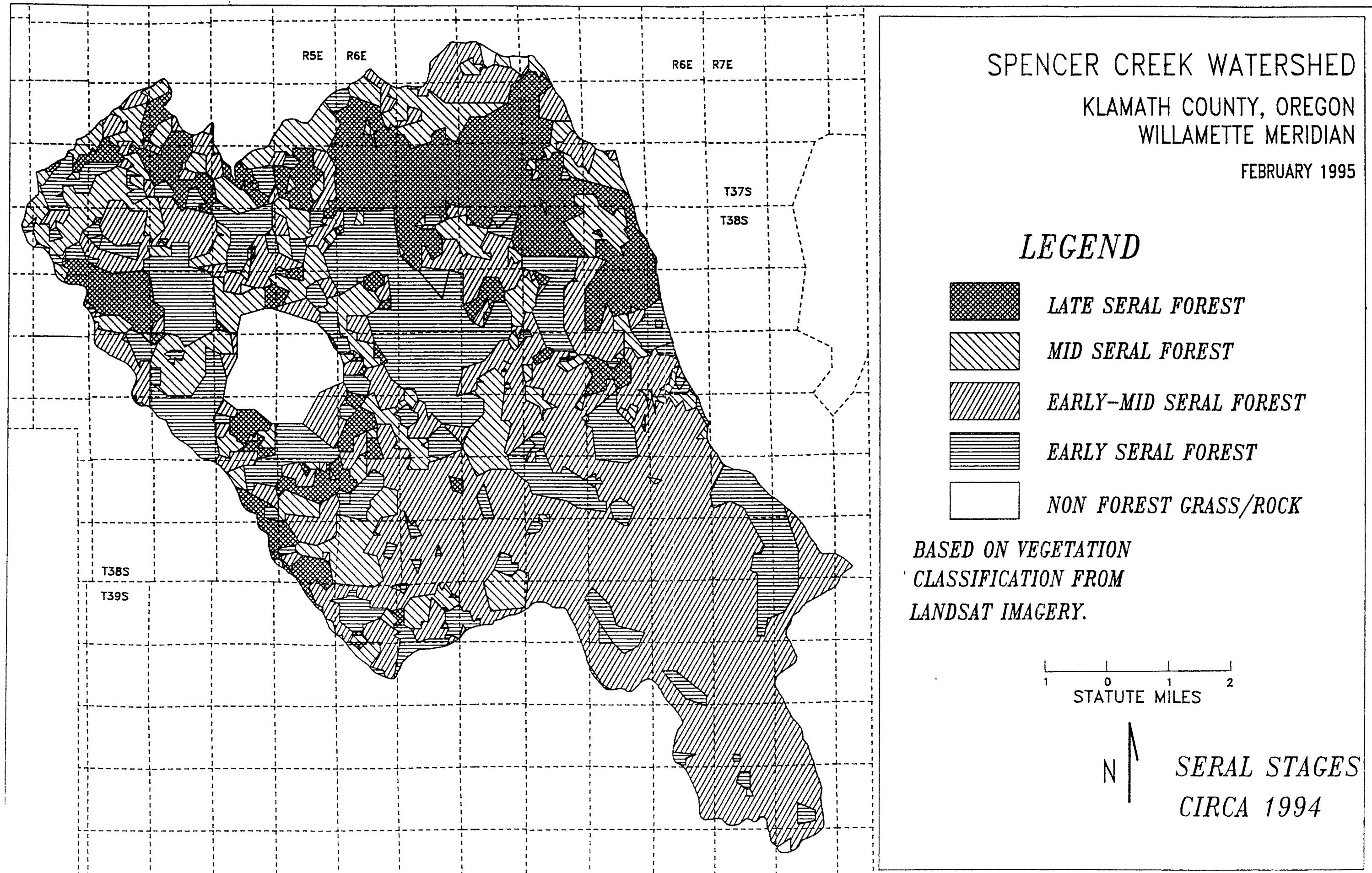
BASED ON VEGETATION CLASSIFICATION
FROM LANDSAT IMAGERY.

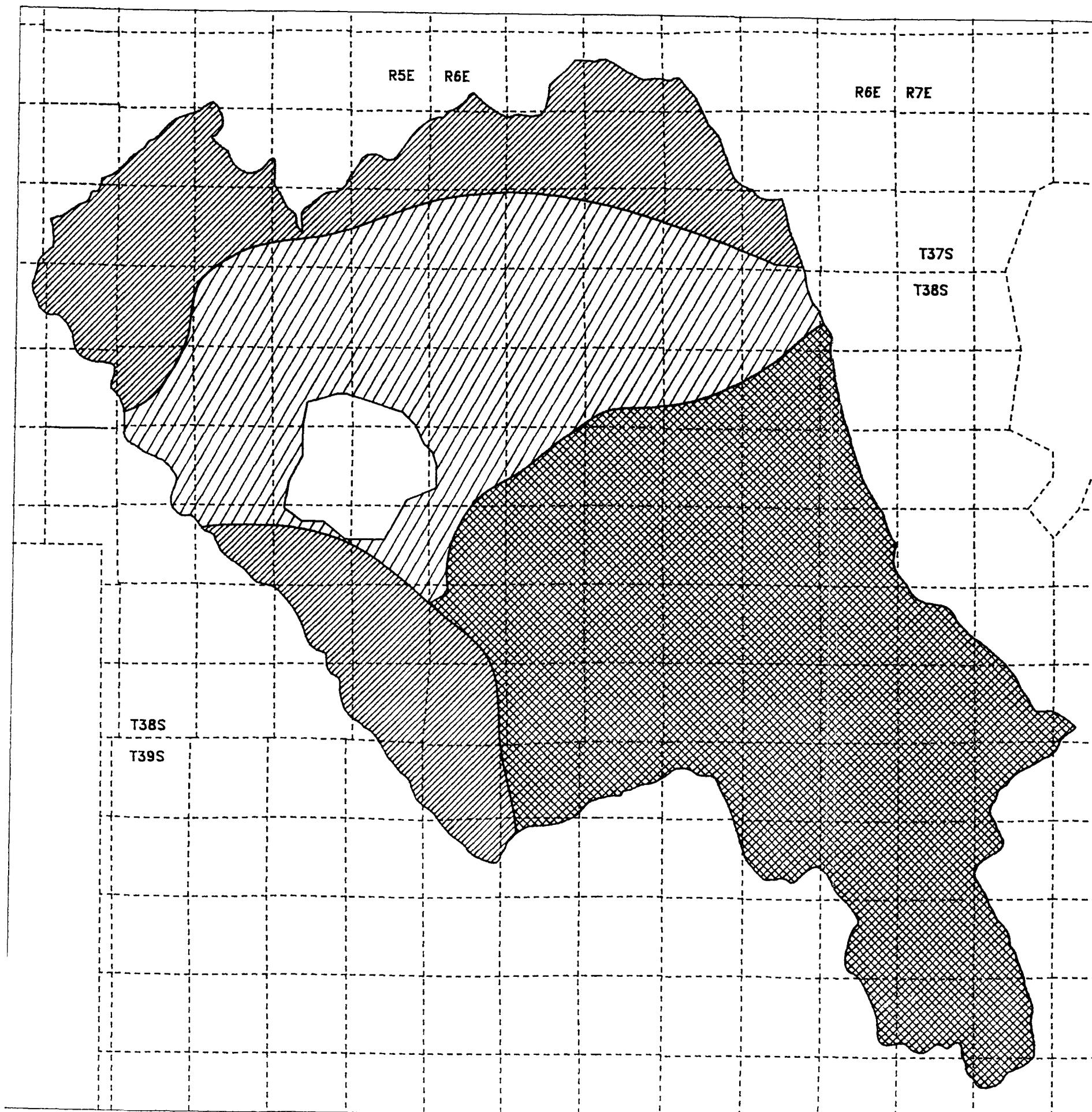
1 0 1 2
STATUTE MILES



DOMINANT
SPECIES
GROUPS
CIRCA 1994

MAP 14



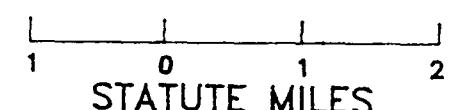


SPENCER CREEK WATERSHED
KLAMATH COUNTY, OREGON
WILLAMETTE MERIDIAN
FEBRUARY 1995

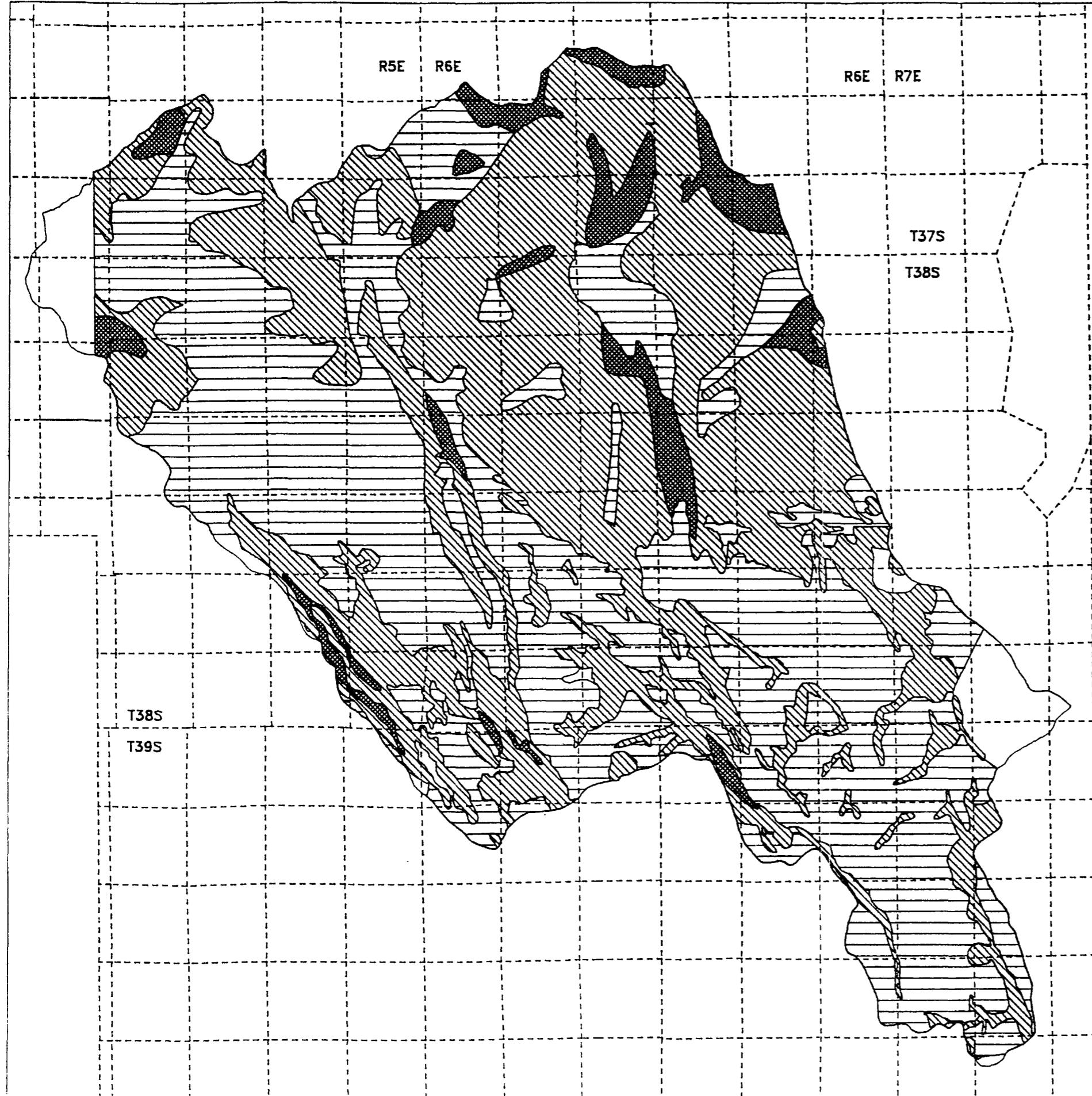
- HIGH MORTALITY
- MODERATE MORTALITY
- LOW MORTALITY
- NOT CLASSIFIED

AREAS OF ONGOING INSECT MORTALITY AND
POTENTIAL FOR HIGHER INTENSITY FIRES.

NOTE: RECENT THINNING IN LAST
1-2 YEARS ON PRIVATE LAND
HAS REDUCED MORTALITY LEVELS.



N ↑ FOREST HEALTH
TREE MORTALITY
ZONES



SPENCER CREEK WATERSHED
KLAMATH COUNTY, OREGON
WILLAMETTE MERIDIAN
FEBRUARY 1995

HIGH RATING
 MODERATE RATING
 LOW RATING
 NOT CLASSIFIED

1 0 1 2
STATUTE MILES

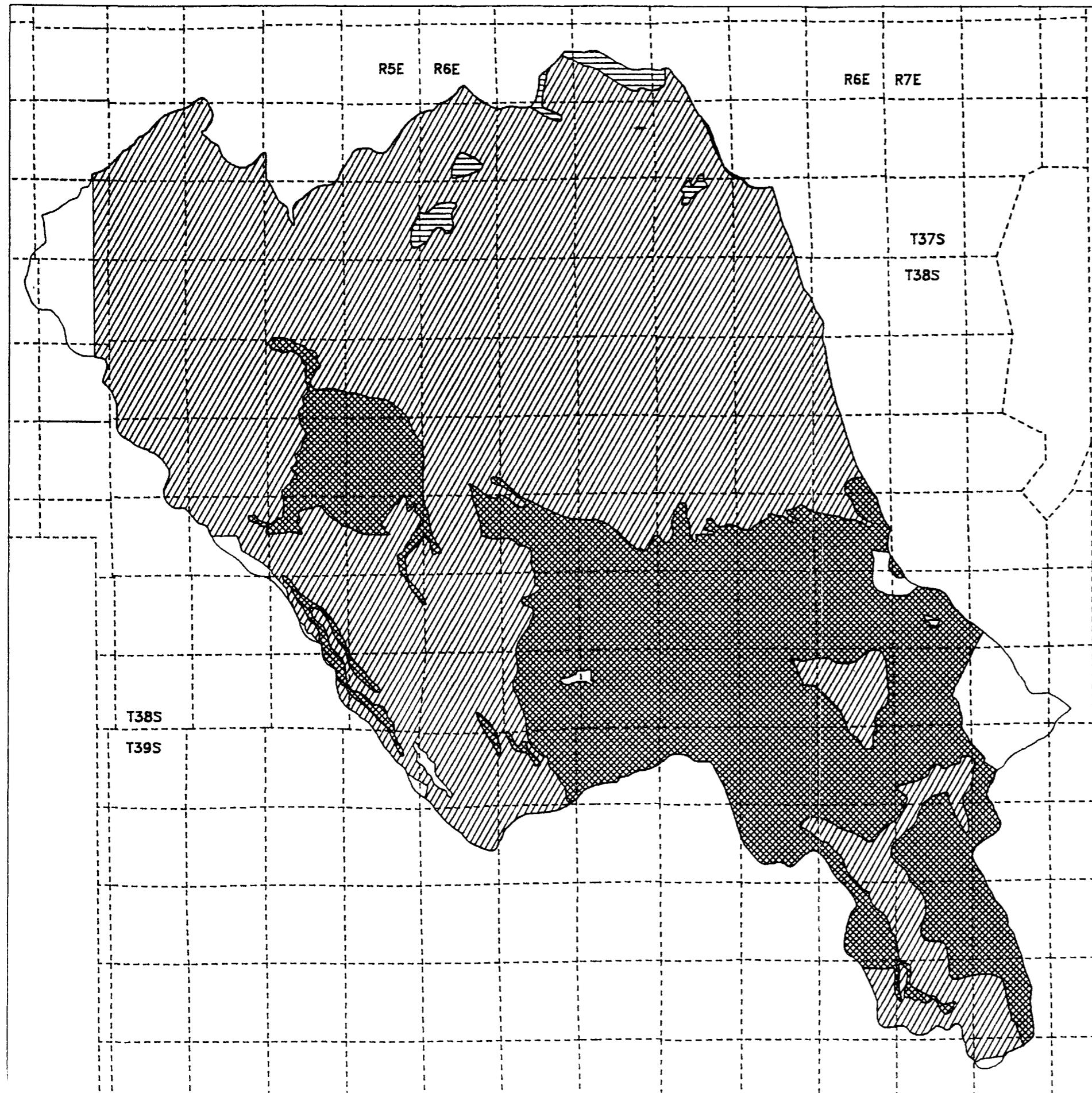
N SURFACE
EROSION
SUSCEPTIBILITY
RATINGS

SPENCER CREEK WATERSHED

KLAMATH COUNTY, OREGON

WILLAMETTE MERIDIAN

FEBRUARY 1995

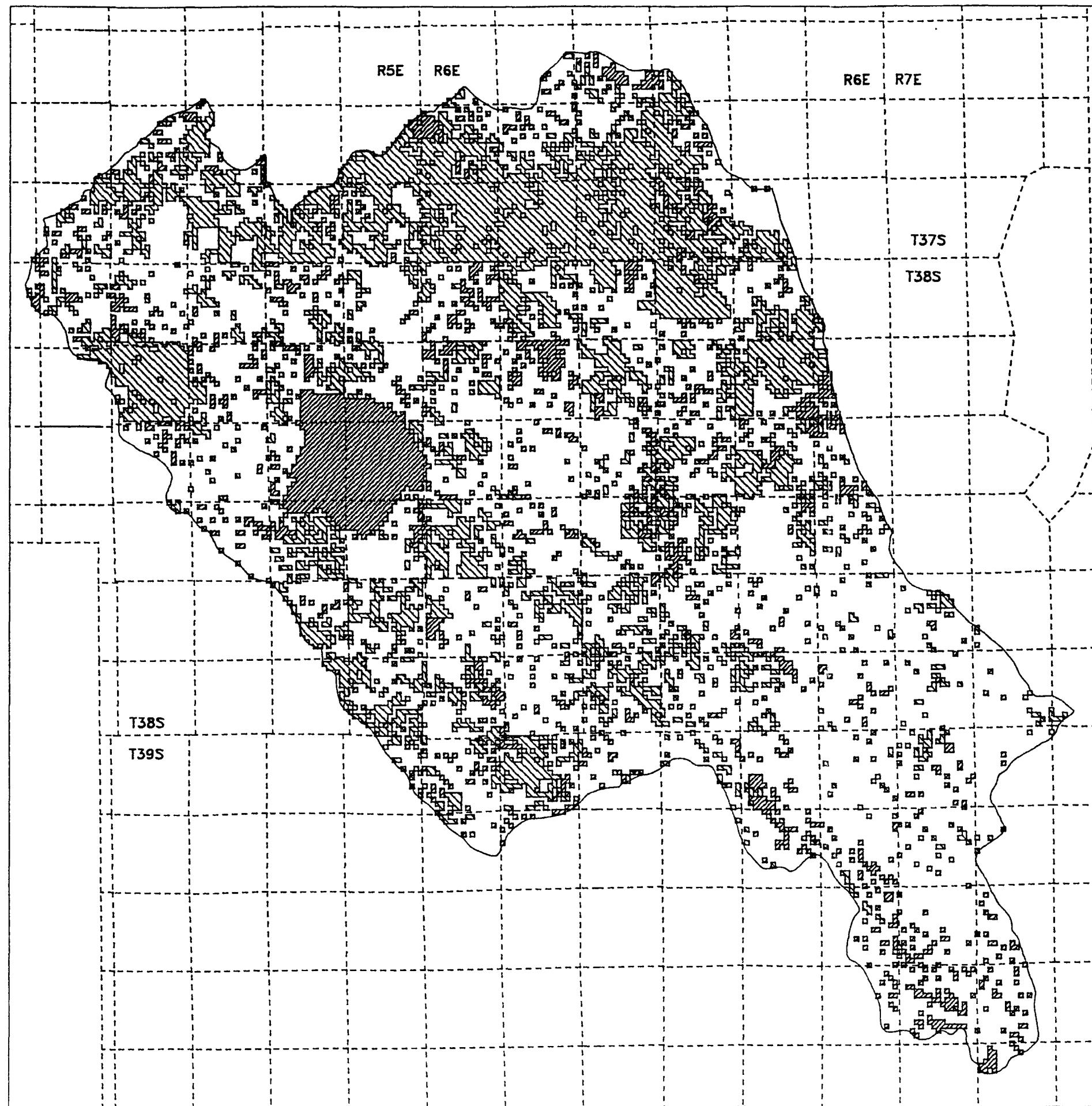


- HIGH RATING
- MODERATE RATING
- LOW RATING
- NOT CLASSIFIED

1 0 1 2
STATUTE MILES

N
COMPACTI
SUSCEPTIBIL
RATINGS

MAP 18



SPENCER CREEK WATERSHED
KLAMATH COUNTY, OREGON
WILLAMETTE MERIDIAN
FEBRUARY 1995

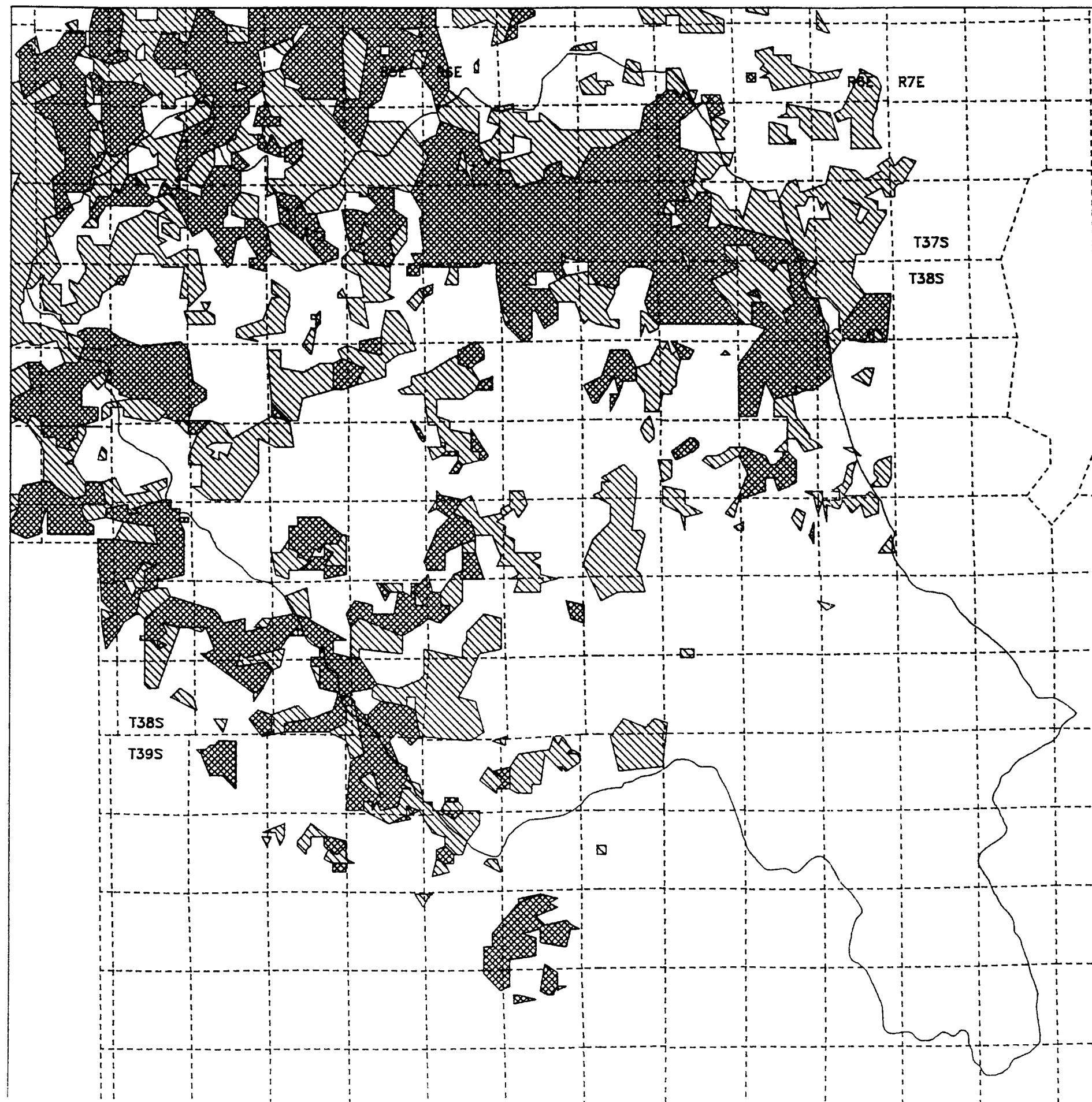
LEGEND

- TREE CANOPY CLOSURE GREATER THAN 55 PERCENT
- TREE CANOPY CLOSURE LESS THAN 55 PERCENT
- NON FOREST GRASS/ROCK /SHRUB

BASED ON VEGETATION
CLASSIFICATION FROM
LANDSAT IMAGERY.

1 0 1 2
STATUTE MILES.

N ↑ CANOPY
CLOSURE
CIRCA 1994



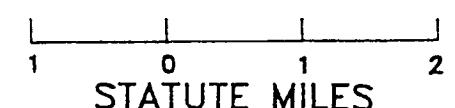
SPENCER CREEK WATERSHED
KLAMATH COUNTY, OREGON
WILLAMETTE MERIDIAN
FEBRUARY 1995

LEGEND

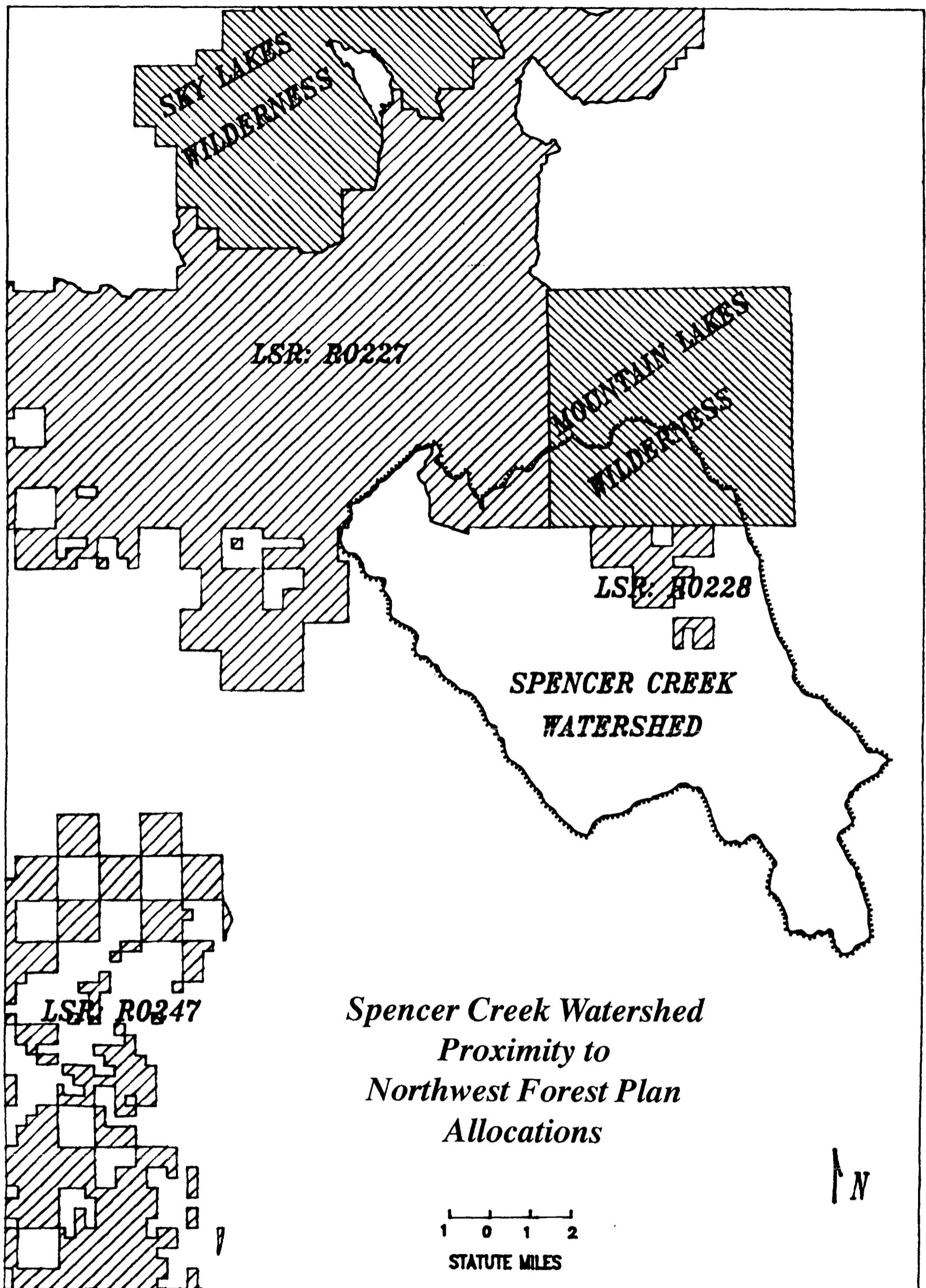
- [Solid dark square] LATE SERAL FOREST
- [Hatched square] MID SERAL FOREST

*MID AND LATE SERAL STAGES
IN SPENCER CREEK WATERSHED
AND IMMEDIATE VICINITY*

*BASED ON VEGETATION
CLASSIFICATION FROM
LANDSAT IMAGERY.*



N
*MID AND LATE
SERAL STAGES
CIRCA 1994*



SPENCER CREEK WATERSHED
KLAMATH COUNTY, OREGON
WILLAMETTE MERIDIAN
FEBRUARY 1995

LEGEND



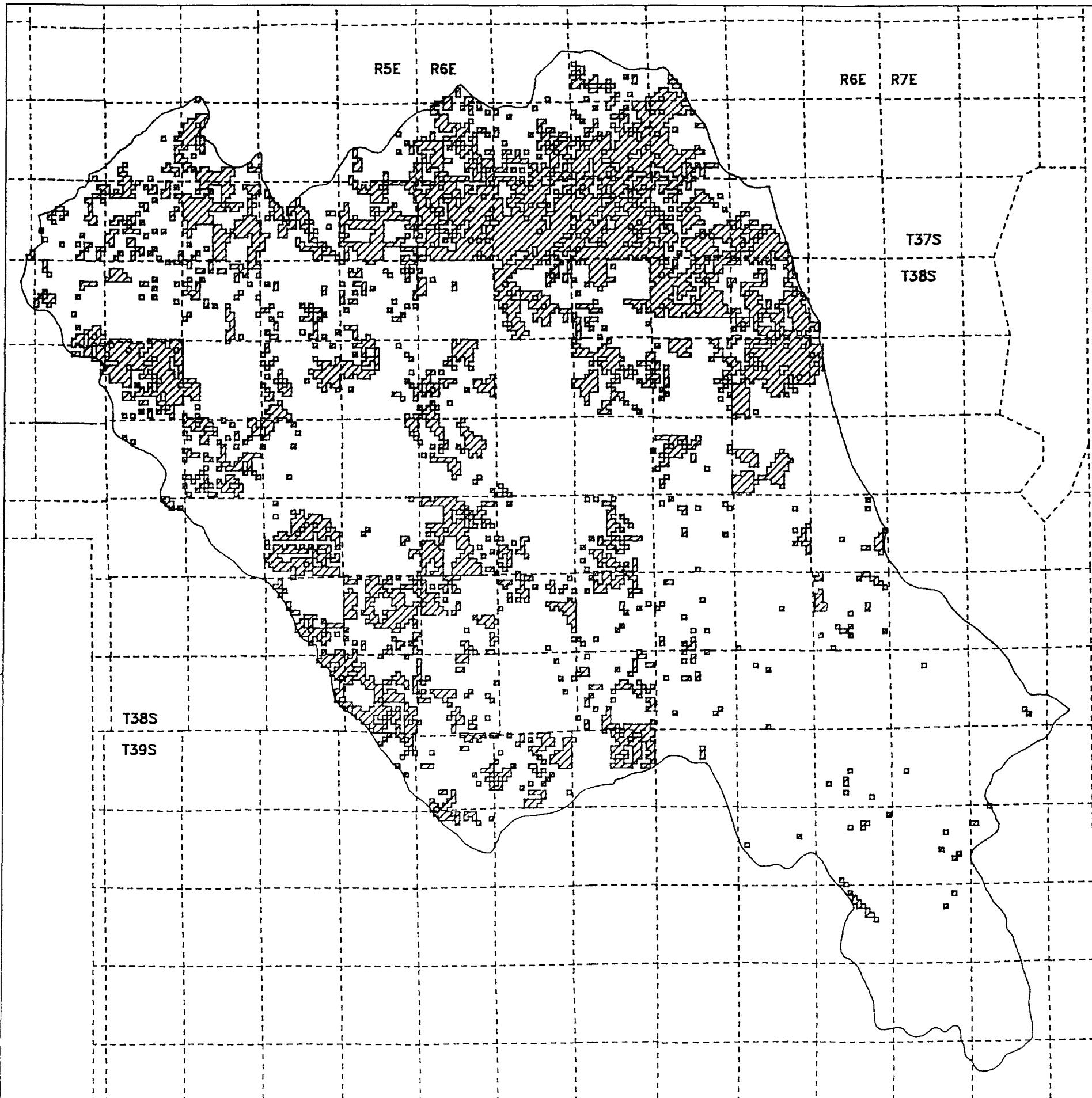
*NESTING, ROOSTING,
FORAGING HABITAT*

*BASED ON VEGETATION
CLASSIFICATION FROM
LANDSAT IMAGERY*

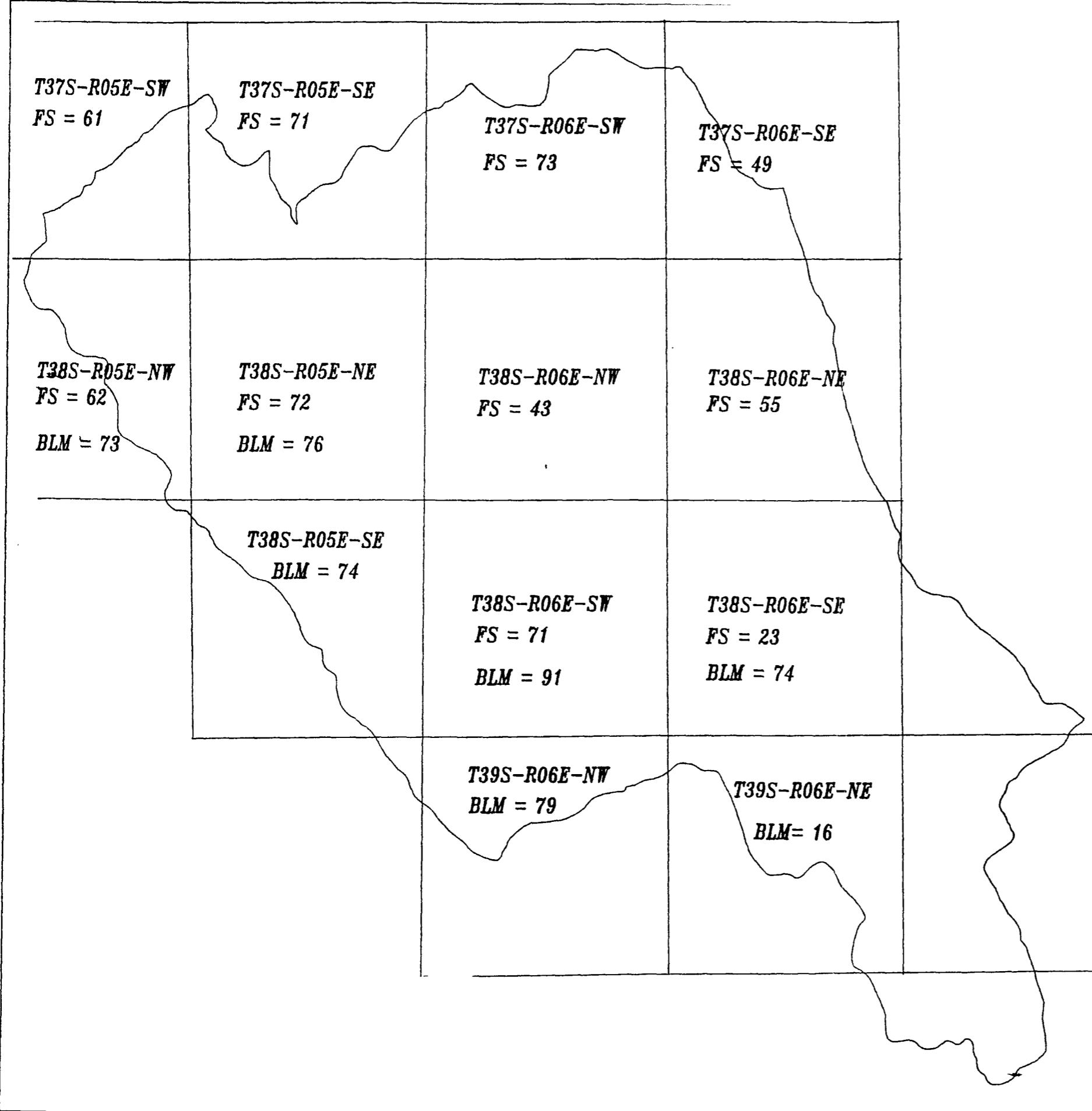
1 0 1 2
STATUTE MILES



*PREDICTED
SPOTTED OWL
HABITAT*



MAP 22



SPENCER CREEK WATERSHED
KLAMATH COUNTY, OREGON
WILLAMETTE MERIDIAN
FEBRUARY 1995

*PERCENT OF FEDERAL LANDS
MEETING NORTHERN SPOTTED
OWL DISPERSAL HABITAT*

*REQUIREMENTS BY
QUARTER TOWNSHIP*

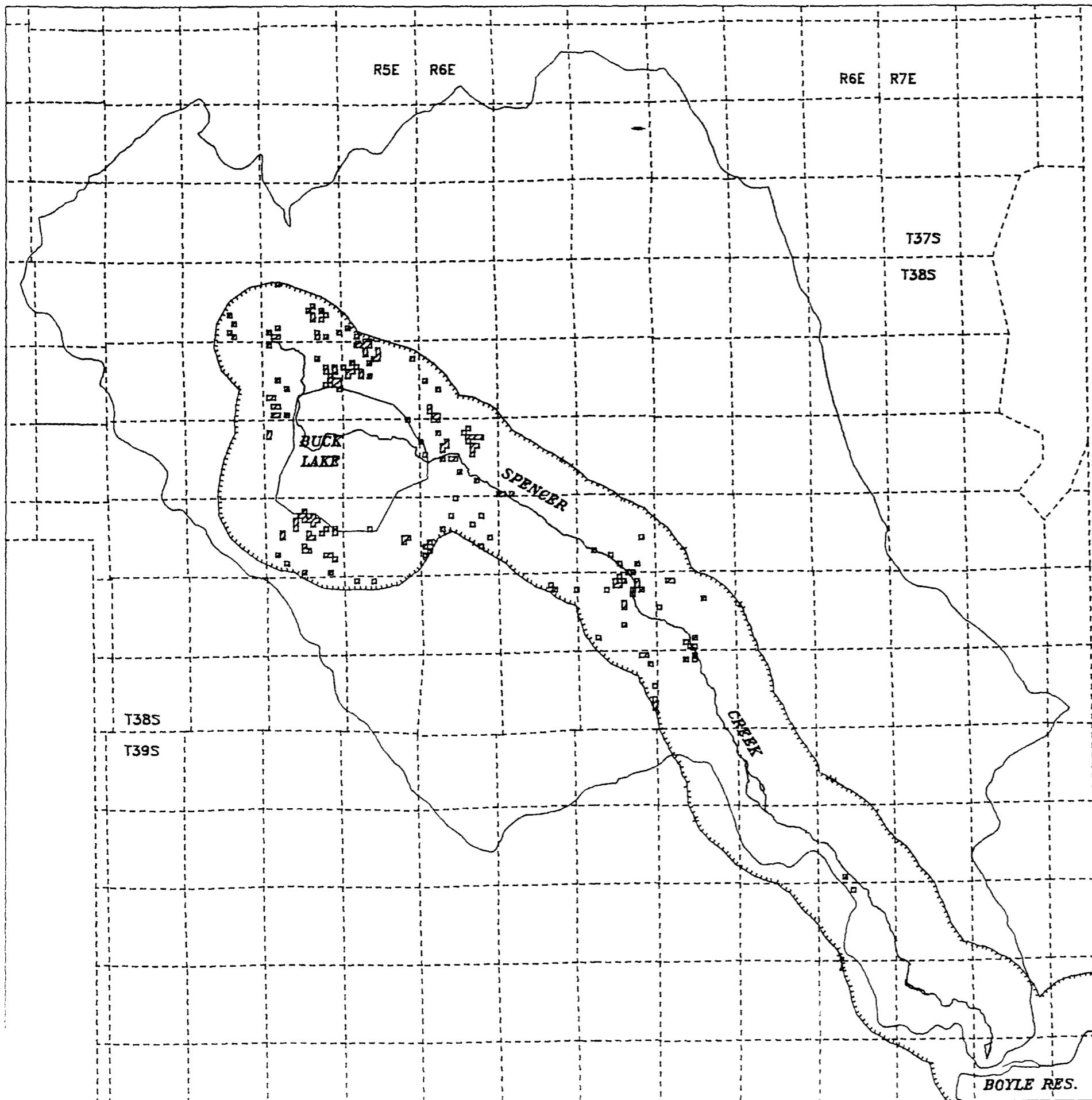
FS = U.S. FOREST SERVICE

BLM = BUREAU OF LAND MANAGEMENT

1 0 1 2
STATUTE MILES

N
*SPOTTED OWL
DISPERSAL
HABITAT*

MAP 23



SPENCER CREEK WATERSHED
KLAMATH COUNTY, OREGON
WILLAMETTE MERIDIAN
FEBRUARY 1995

LEGEND

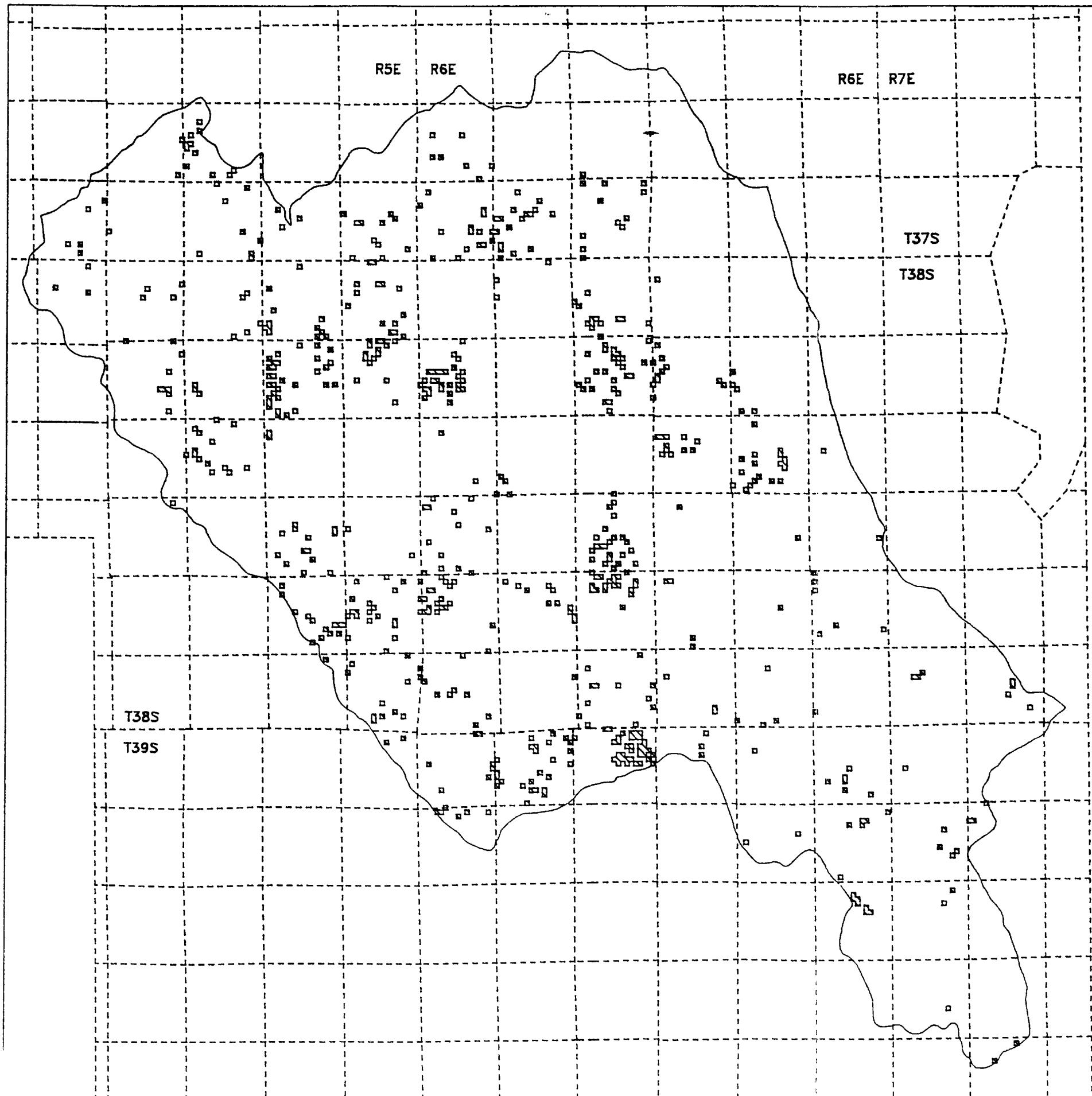
- SUITABLE NESTING HABITAT
- AREA WITHIN .75 MILE OF OPEN WATER

HABITAT MOST LIKELY TO BE USED FOR NESTING IS WITHIN .75 MILES OF THE KLAMATH RIVER, SPENCER CREEK, BUCK LAKE AND BOYLE RESERVOIR.



N PREDICTED BALD EAGLE NESTING HABITAT

MAP 24



SPENCER CREEK WATERSHED
KLAMATH COUNTY, OREGON
WILLAMETTE MERIDIAN
FEBRUARY 1995

LEGEND



PREFERRED BREEDING AND
FEEDING HABITAT

BASED ON VEGETATION
CLASSIFICATION FROM
LANDSAT IMAGERY

1 0 1 2
STATUTE MILES

N
PREDICTED
WHITE HEADED
WOODPECKER
HABITAT

MAP 25

SPENCER CREEK WATERSHED

KLAMATH COUNTY, OREGON

WILLAMETTE MERIDIAN

FEBRUARY 1995



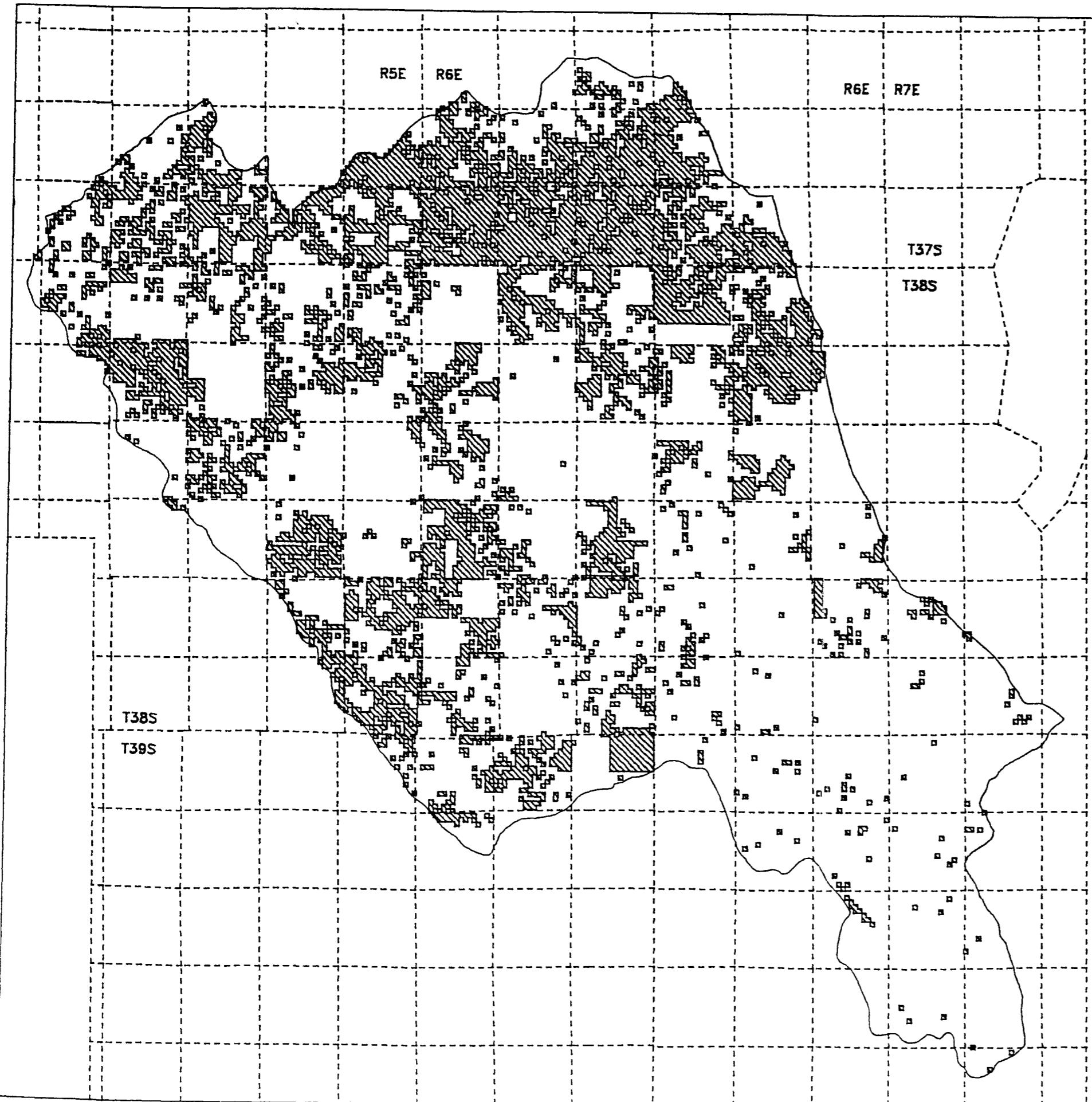
DEER HIDING COVER

BASED ON VEGETATION
CLASSIFICATION FROM
LANDSAT IMAGERY

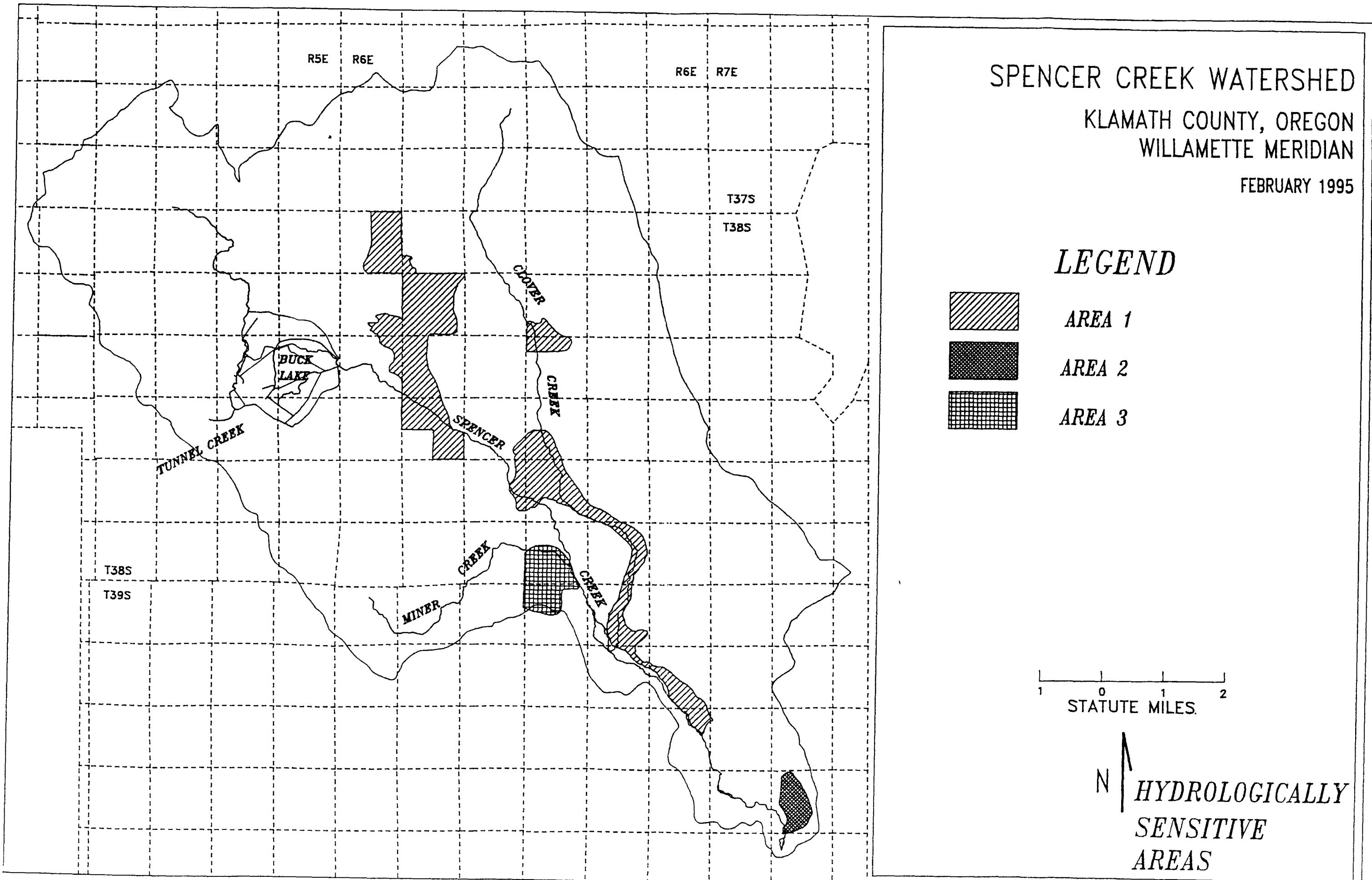
1 0 1 2
STATUTE MILES



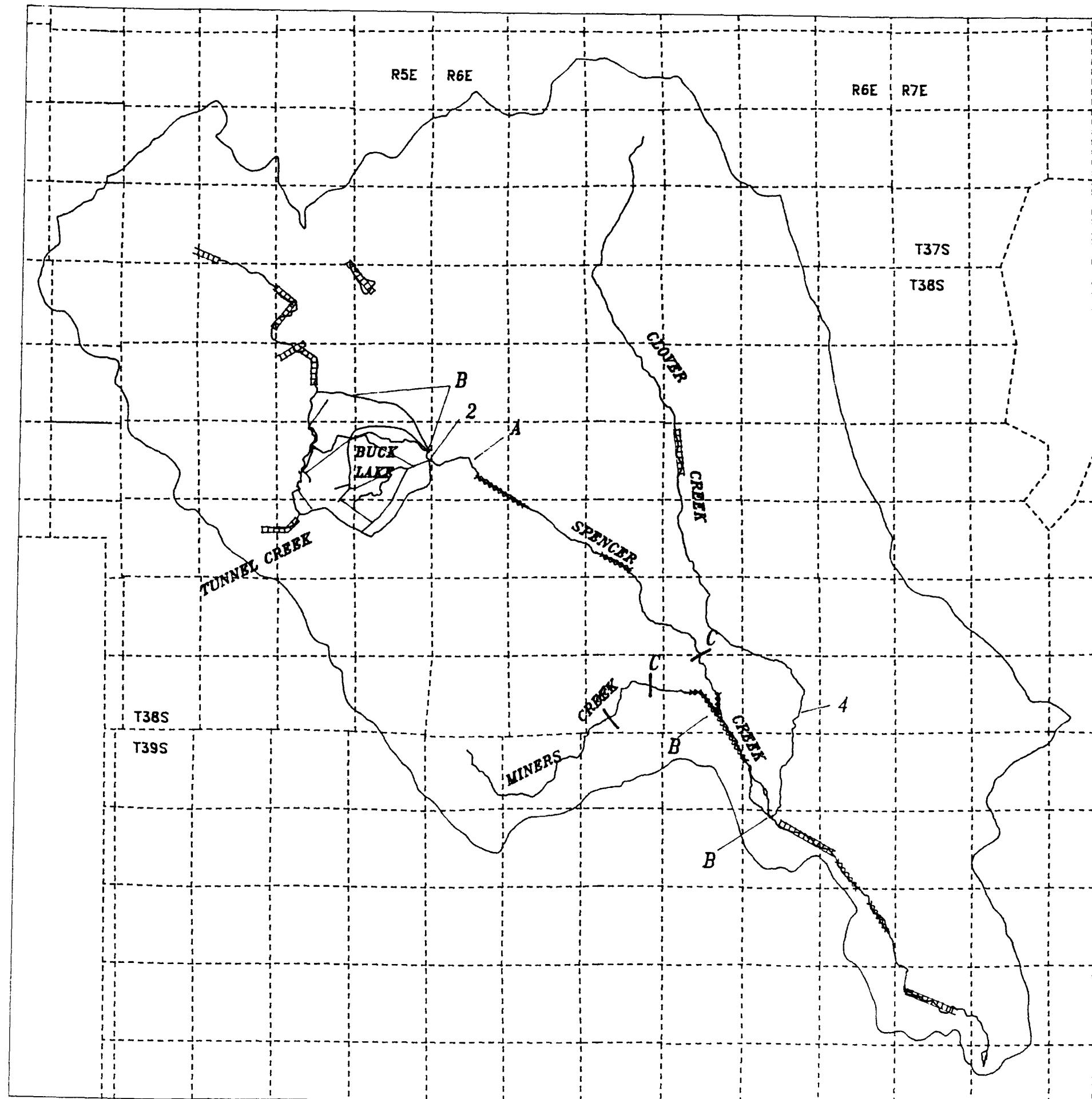
PREDICTED
DEER HIDING
COVER



MAP 26



MAP 27



SPENCER CREEK WATERSHED

KLAMATH COUNTY, OREGON

WILLAMETTE MERIDIAN

FEBRUARY 1995

LEGEND

INSTREAM STRUCTURE RESTORATION

FENCE SENSITIVE AREAS

2 OUTFLOW CANAL HABITAT IMPROVEMENT

4 PILED GRAVEL TAILINGS

POTENTIAL BARRIERS TO FISH MIGRATION

A CASCADE

B DEWATERING

C CULVERTS

1 0 1 2
STATUTE MILES

N ↑ RESTORATION OPPORTUNITIES AND PROBLEM AREAS

MAP 28

SPENCER CREEK WATERSHED
KLAMATH COUNTY, OREGON
WILLAMETTE MERIDIAN
FEBRUARY 1995

LEGEND

*L = LOW: LESS THAN 20 PERCENT
CANOPY CLOSURE*

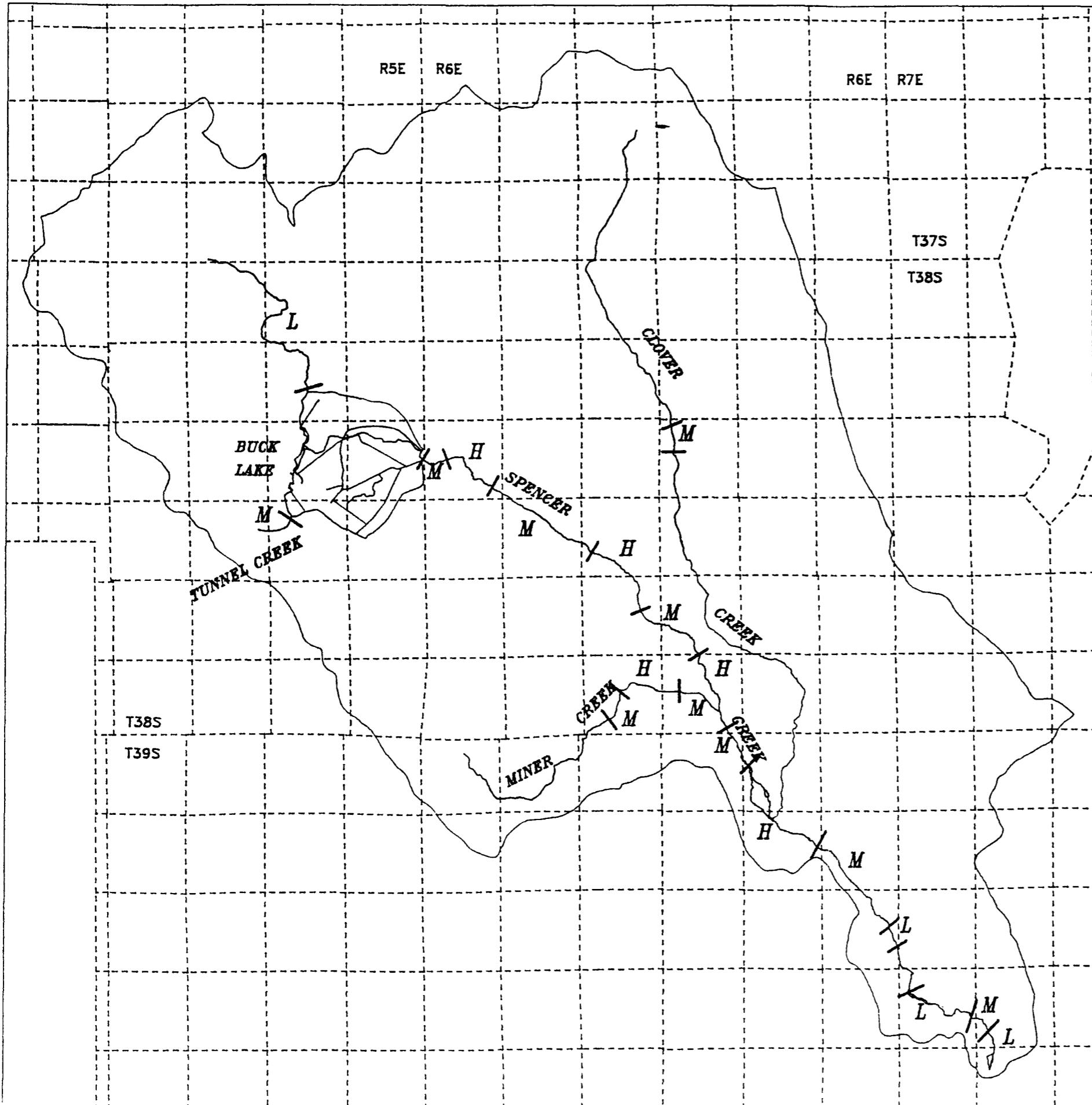
*M = MEDIUM: 20 - 40 PERCENT
CANOPY CLOSURE*

*H = HIGH: 40 - 70 PERCENT
CANOPY CLOSURE*

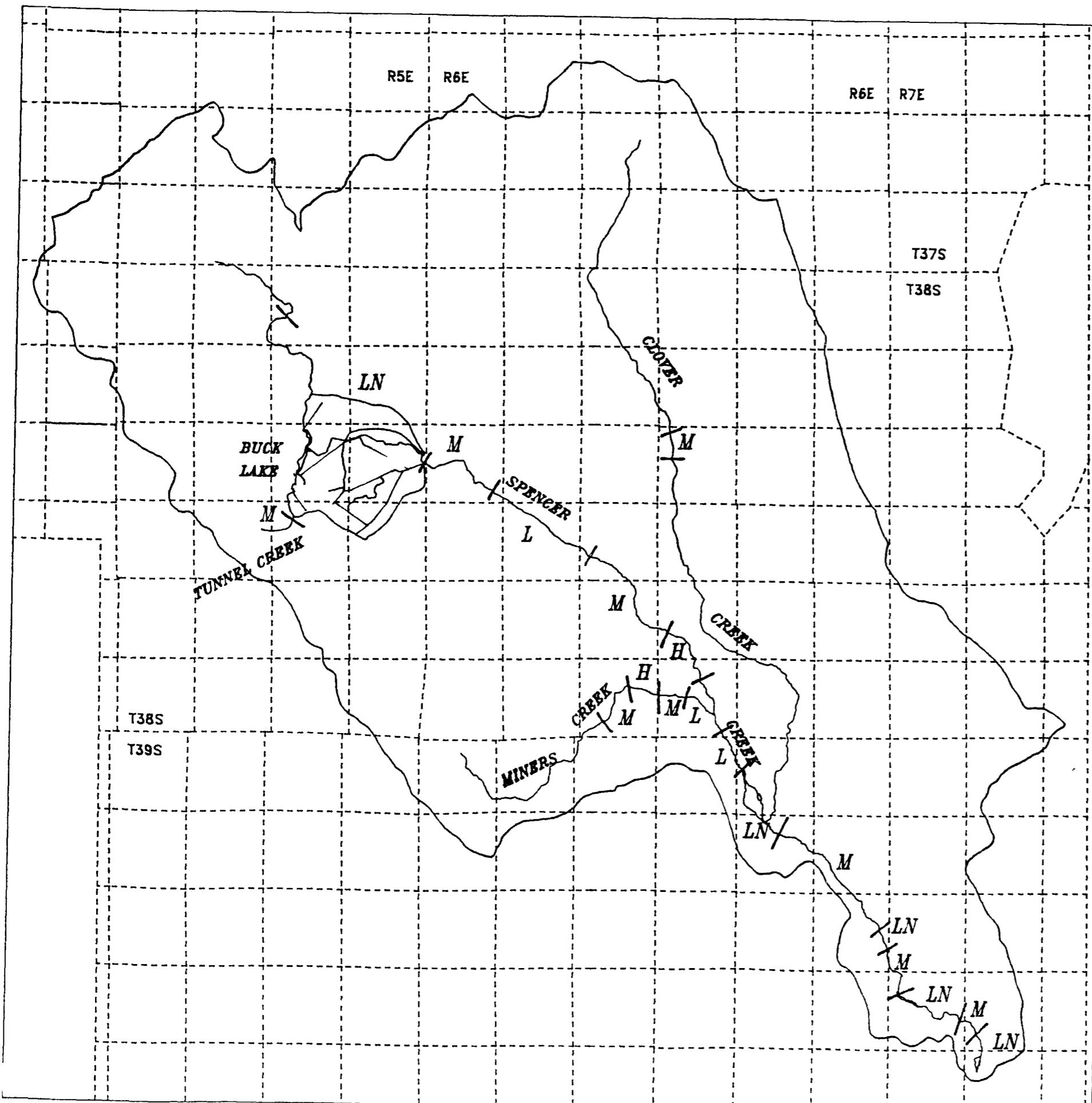
*CANOPY CLOSURE AS A MEASURE OF STREAM
SHADING WITHIN FISH BEARING SEGMENTS.*

1 0 1 2
STATUTE MILES

N
*STREAM
SHADING*



SPENCER CREEK WATERSHED
KLAMATH COUNTY, OREGON
WILLAMETTE MERIDIAN
FEBRUARY 1995



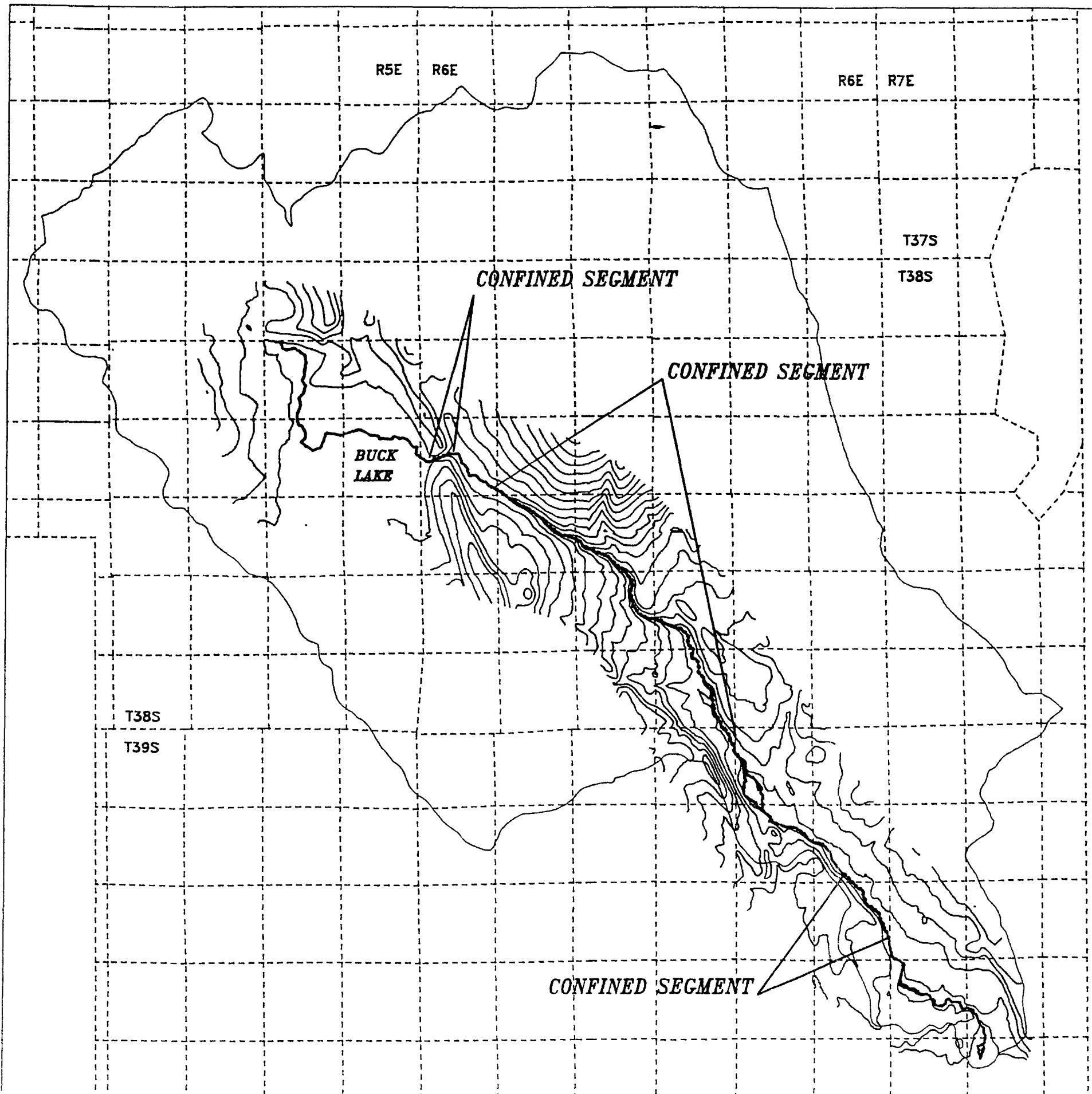
LEGEND

L = LOW POTENTIAL
M = MODERATE POTENTIAL
H = HIGH POTENTIAL
LN = LOW DUE TO NATURAL CONDITIONS

NEAR-TERM LARGE WOODY DEBRIS RECRUITMENT POTENTIAL ALONG FISH BEARING SEGMENTS



N
LARGE WOOD RECRUITMENT POTENTIAL



SPENCER CREEK WATERSHED
KLAMATH COUNTY, OREGON
WILLAMETTE MERIDIAN
FEBRUARY 1995

LEGEND

SPENCER CREEK
PERENNIAL SEGMENTS

CONTOUR INTERVAL: 80 FEET

1 0 1 2
STATUTE MILES

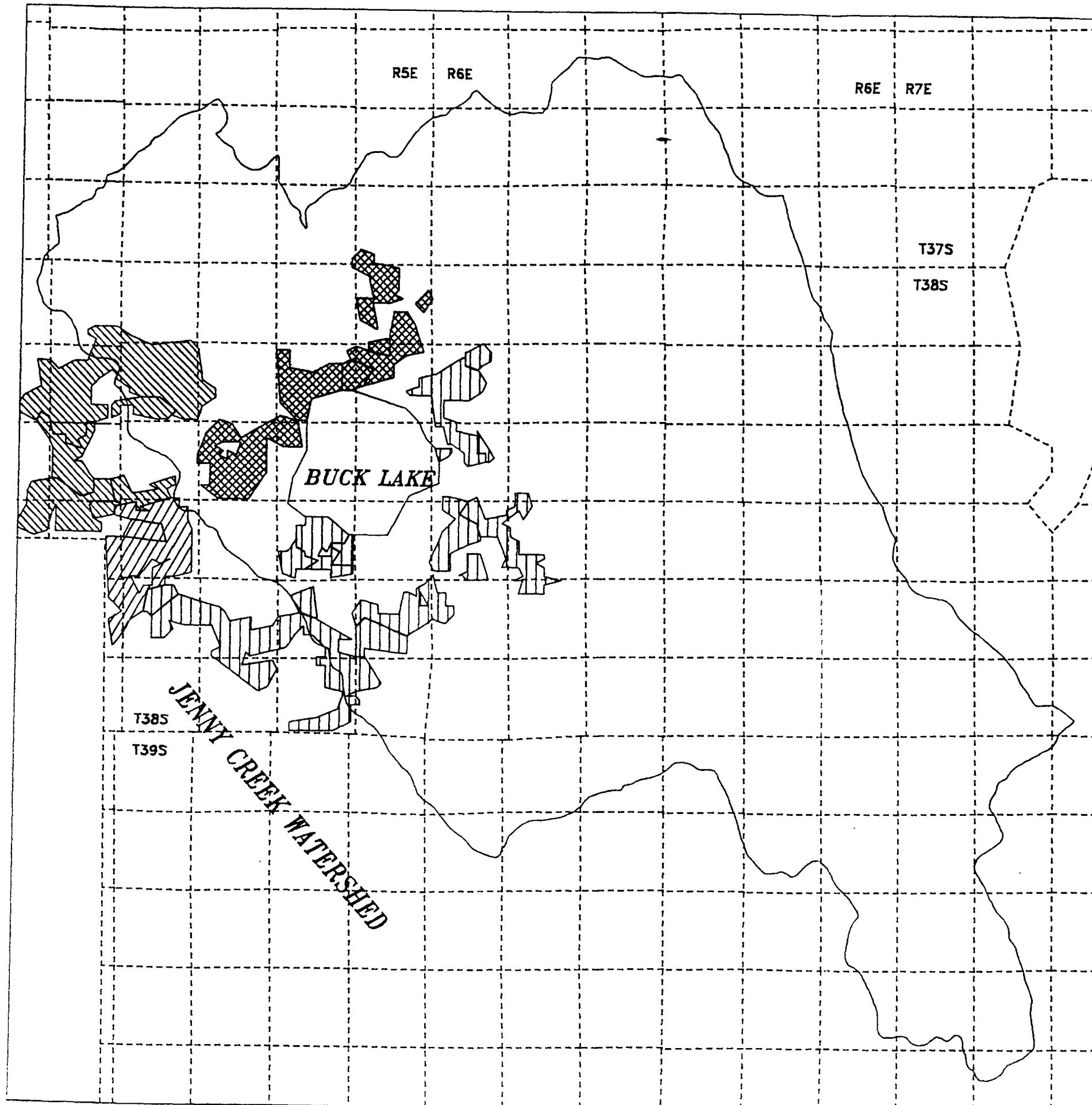
N SPENCER CREEK
CONFINED CHANNEL
SEGMENTS

SPENCER CREEK WATERSHED

KLAMATH COUNTY, OREGON

WILLAMETTE MERIDIAN

FEBRUARY 1995



CORRIDORS 1 AND 2

CORRIDOR 2

CORRIDOR 3

HEADWATERS OF
JOHNSON CREEK

MID AND LATE SERAL STANDS
SUITABLE FOR INCLUSION
WITHIN CONNECTIVITY CORRIDORS

1 0 1 2
STATUTE MILES

N
POTENTIAL
CONNECTIVITY
CORRIDORS

MAP 32

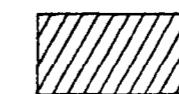
SPENCER CREEK WATERSHED

KLAMATH COUNTY, OREGON
WILLAMETTE MERIDIAN

FEBRUARY 1995

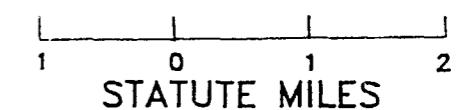


PRIORITY 1 AREAS

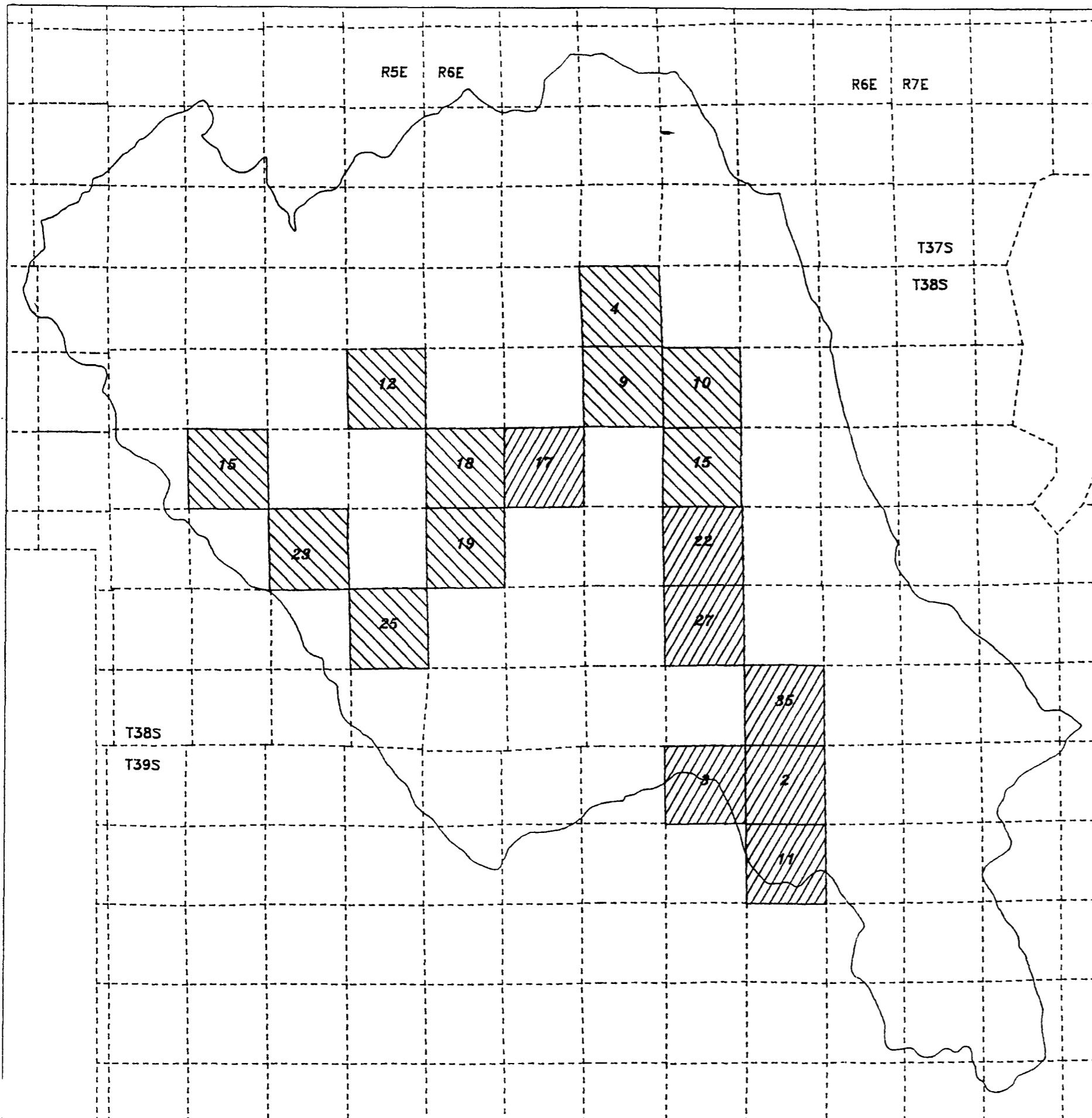


PRIORITY 2 AREAS

AREAS IDENTIFIED FOR EVALUATION OF
ROAD CLOSURE OR OBLITERATION
OPPORTUNITIES FOR THE BENEFIT
OF DEER AND ELK.



N ↑ DEER & ELK
ROAD CLOSURE
EVALUATION
AREAS



MAP 33

